

SCOPE OF WORK FOR
 TRADITIONAL CULTURAL LANDSCAPE STUDY IN THE VICINITY OF THE US/MEXICO
 BORDER ON THE BARRY M. GOLDWATER RANGE WEST FOR MARINE CORPS AIR
 STATION YUMA, ARIZONA

TABLE OF CONTENTS

SECTION LETTER	TITLE	PAGE
A	INTRODUCTION	2
B	PURPOSE	2
C	LOCATION	2
D	DESIGNATED REPRESENTATIVES	2
E	PERIOD OF PERFORMANCE	3
F	PROVISIONS TO THE RECIPIENT	4
G	GENERAL REQUIREMENTS	5
H	SPECIFIC REQUIREMENTS	7
I	MEETINGS/COORDINATION	9
J	SUBMITTALS AND SCHEDULES	10
K	DATA AND PUBLICATION	13
L	RELEASE OF INFORMATION	13
M	SAFETY	14
N	HOLD HARMLESS	15
O	INSURANCE	15
P	PAYMENTS	17
Q	EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT REPORTING	17
Attachment A	INSURANCE REQUIREMENTS	
Attachment B	WAWF INSTRUCTIONS	
Attachment C	SPECIFICATIONS FOR GEOSPATIAL DATA	
Attachment D	ARCHAEOLOGICAL SUREY AND REPORT STANDARDS	

A. INTRODUCTION

The mission of Marine Corps Air Station (MCAS) Yuma is to support Marine Corps aerial weapons training and to serve as a base of operations for Marine Aviation Weapons and Tactics Squadron 1 (MAWTS 1) and 3rd Marine Aircraft Wing units, to include Marine Aircraft Group 13. One of the primary training programs conducted at MCAS Yuma is the Weapons and Tactics Instructor (WTI) course, hosted twice a year by MAWTS 1. Numerous other training programs, exercises, and activities are also conducted aboard the station. In addition to military use, the general public is allowed to obtain recreation permits (for hiking, camping, shooting, etc.) on the Barry M. Goldwater Range West (BMGRW). While foot travel is allowed over much of the range, vehicle travel is limited to specific existing roads. The US Customs and Border Protection also conducts aspects of their mission on the BMGRW.

B. PURPOSE

This Cooperative Agreement, as detailed below, is designed to obtain the professional services, labor, materials, and equipment necessary to complete a traditional cultural landscape study in the vicinity of the BMGRW Border with Mexico (within five miles on the US side). The project is located on the BMGRW, in southwestern Arizona (Figure 1). The purpose of this study is to identify how and to what degree Native American communities, past and present, view(ed) and utilize(d) the natural landscape. The Department of the Navy (Navy) Naval Facilities Engineering Command Southwest (NAVFAC SW) will administer this Cooperative Agreement.

Authority: The program is being conducted in accordance with Public Law 91-190, the National Environmental Policy Act of 1969; Public Law 93-291, Preservation of Historic and Archaeological Data, amending Public Law 96-523; and the National Historic Preservation Act of 1966, as amended by Public Law 94-43. Also applicable is Marine Corps Environmental Compliance and Protection Manual, Chapter 8, Cultural Resources Management, "Marine Corps Air Station Yuma, Archaeological Survey and Report Standards" (Appendix D), and 36 CFR 800, Protection of Historic Properties.

C. LOCATION

Work will include office and research duties at various locations (e.g., tribal offices, Recipient's office) and field duties at the BMGRW.

D. 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

2. The Cooperative Agreement Technical Representative (CATR) is Joseph Baumann, Archaeologist, Naval Facilities Engineering Command, Southwest, 1220 Pacific Hwy, Bldg 1, San Diego CA 92132; telephone (562) 818-2848 and email: josephbaumann@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 Installation 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 effect any change to this Cooperative Agreement.

3. The Installation Representative (IR) is Karla James, Range Management Division, MCAS Yuma AZ 85369; telephone (928) 269-2288 and email: karla.james@usmc.mil.

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

4. For the purposes of this Cooperative Agreement, the term Recipient shall mean **TBD**. The use of the term Recipient in this Cooperative Agreement includes **TBD** and all designated representative(s).

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

6. The Recipient 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 Recipient.

E. PERIOD OF PERFORMANCE

The period of performance covered by this Cooperative Agreement is 24 months upon award with up to 60-month Option Period that, if exercised, will extend the period of performance by another 24 months. The end date is the anticipated date that the Final Report is accepted by the Government. The parties may extend the term of this Cooperative Agreement by written modification. The total duration of this Cooperative Agreement, including the Option Period and any time-extension modifications, shall not exceed 60 months. The Option Period is subject to the availability of funds and may be awarded unilaterally.

A fifteen (15) day period, starting on date of award, will be used for the Recipient to provide preliminary documents to the CAA and CATR. Documents include, but are not limited to, Insurance documents/certificates and a Draft Work Plan. Recipient may not begin performance until preliminary documents are submitted and accepted/approved as appropriate.

F. PROVISIONS TO THE RECIPIENT

MCAS Yuma agrees to the following terms for this cooperative project:

1. MCAS Yuma shall provide the Contractor: (1) a copy of pertinent previous archaeological investigations; (2) copies of or access to copies of other applicable cultural resources data housed at MCAS Yuma; (3) the location of the area(s) to be investigated; (4) SDSFIE compliant GIS database; (5) contact lists for tribes; and (6) assistance with range radios and access to the installation.
2. MCAS Yuma agrees to provide access to the Barry M. Goldwater Range West as needed for the Landscape Study.
 - Access to MCAS Yuma will be coordinated through the Range Management Department (RMD). Requests for range access must be made 2 weeks prior to start of fieldwork, and personnel/vehicle information must also be provided 2 weeks in advance.
 - All personnel to participate in fieldwork at MCAS Yuma must receive a safety briefing before they perform any fieldwork. Rules and regulations for the safe conduct of work on MCAS Yuma shall be followed at all times. The Contractor must maintain communications with LEG IRON, range control at MCAS Yuma; RMD will provide hand held radios for contractor use.
3. Funding. MCAS Yuma agrees to provide funds to support the following budget estimate

Personnel

1 Principal Investigator (PI)/Archaeologist/Senior Researcher (80 hours)

1 Researcher (200 hours)

1 Ethnographer (300 hours)

1 Word Processor (20 hours)

1 GIS Specialist (20 hours)

Principal Investigator (PI)/Archaeologist/Senior Researcher.

The Recipient shall provide one archaeologist/cultural resource specialist capable and qualified to meet the requirements of the Scope of Work. This person shall, at the minimum:

- have previously conducted and written a cultural landscape study for which they successfully communicated with Native American tribal representatives;
- have at least five years of documented experience in Native American traditional use studies focused on past and present properties of traditional, religious, and cultural significance;
- have at least five years of documented experience in ethnohistorical research; and

meet the Secretary of the Interior's Professional Qualification Standards in Prehistoric Archaeology (Secretary of the Interior, Federal Register, Vol. 48 No. 190).

The Applicant shall provide type-written resumes, not to exceed 5 pages each, single spaced with

12pt font.

G. GENERAL REQUIREMENTS

1. The Recipient shall provide all labor, supervision, meals, and lodging for him/herself and his/her personnel. All Recipient equipment is subject to inspection and approval by the Installation Representative.
2. The Recipient shall provide an Archaeologist with specialization in Cultural Landscape Studies and compliant with the guidelines set forth in *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (Federal Register, Vol. 48, No. 190, 44716-44742). Personnel shall have a CV demonstrating a skillset commensurate with the duties described in Section H – Specific Requirements.
3. The Government reserves the right, during the term of this Cooperative Agreement, to review work histories of any Recipient's employee for the purposes of verifying compliance with the above requirements. The Government may, in its sole discretion, determine that an employee is noncompliant and require substitution of a compliant employee and such requirement shall not be grounds for equitable adjustment or claim. The Government may, in its sole discretion, reject a proposed employee.
4. If the archaeologist is unable to conduct the duties as described in this Scope of Work, including for reasons unrelated to this project, the Recipient shall replace the individual without any loss in service provided to the Government. The Government may, in its sole discretion, reject the proposed replacement employee.
5. Personnel assigned to, or utilized by, the Recipient in performance of work shall be fully capable of performing the contemplated functions of the respective labor categories in an efficient, reliable, and professional manner.
6. Recipient personnel must be proficient in Microsoft Office word processing, Excel spreadsheet, Access Database, presentation software, digital photography, photogrammetry, Geographic Information Systems, GPS units, and terrestrial LiDAR.
7. **Security Clearance:** All personnel working on this Cooperative Agreement shall be United States citizens or shall carry a valid U.S. Immigration Alien/Registration card. All permanent and temporary employees shall be able to communicate in English, both orally and in writing. The Recipient shall be responsible for obtaining any certifications, licensing, and proof of citizenship/alien status that may be required by personnel to support tasks performed under this contract.
8. The Recipient is responsible for providing information required for obtaining clearances, permits, passes, or security badges required for personnel or equipment access. This includes information required for police or background checks or investigations and all other requirements of the issuing activity. Since base access is minimally required for this Cooperative Agreement, DBIDS will not be needed. The Recipient shall provide all necessary information to the Government to allow access privileges.

9. The Recipient 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 this Cooperative Agreement.

10. The Commanding Officer of MCAS Yuma 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 the exercise of this authority, the Commanding Officer may refuse to grant personal entry passes or may bar employees, including employees who have been granted a personal entry pass. Refusal to grant an employee a personal entry pass does not relieve the Recipient of the responsibility to continue performance under this contract.

11. The Recipient's employees shall observe and comply with all Base rules and regulations applicable to 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 Cooperative Agreement.

12. Personnel performing work under this Cooperative Agreement shall be readily identifiable as an employee of the organization through the use of uniforms or name tags, or via an alternate method approved by the Grants Officer.

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

14. **Correspondence** – The Cooperator shall provide copies of all correspondence to CATR and IR. The Cooperative Agreement number shown in the heading of this scope of work shall be used on all reports and correspondence relative to this Cooperative Agreement.

15. **Oral Directions** – Verbal directions, instructions, explanations, commitments and/or acceptances conveyed to the Recipient or their personnel by any Government employee shall not be construed by the Recipient as a change in scope to this delivery order. Any change or changes in scope of work must be issued to the Recipient, in writing, by the Grants Officer to be binding on the Government.

16. **Public Affairs** – The Cooperator shall refer all press (media) or public contacts, in matters of public concern, to the IR and shall notify the NAVFAC SW CATR of their actions. The personnel shall not discuss any issues with the press or public contacts until authorization has been obtained from the IR and Navy's Public Affairs Officer. The contractor shall not make available to the news media, nor make public disclosure of, any data resulting from actions in this Cooperative Agreement. The Recipient may not distribute reports or data to any other source, unless specifically authorized by the IR and Navy's Public Affairs Officer.

17. **Ownership of Data and Materials** – Title to all data recovered or generated under this solicitation is vested with the U.S. Marine Corps.

18. **Security** – Since the materials and data generated under this solicitation are the property of the Government and since the Recipient will be acting as an agent of the Government, the Recipient shall continually provide for the secure safekeeping of the data, or any other material in their custody.

19. **Publicity** – The Recipient shall not present the material in any format nor release for publication any article, sketch, photograph, report, account, or any other material of any nature pertaining to the work for which services are performed under the terms of this Cooperative Agreement unless written permission is obtained from the IR and Grants Officer.

20. Sections of this Agreement may be added to, deleted, or modified during the year to reflect project changes or new information, such as program cost increases or manpower requirements. Any management activities not specifically provided for within this Scope of Work that are deemed necessary to carry out this Cooperative Agreement shall be discussed with and mutually agreed to by the Recipient, CATR, CAA and IR prior to implementation by the Recipient. Changes to this Cooperative Agreement will be made effective only through an Cooperative Agreement Amendment signed by the Recipient and the Grant Officer.

H. SPECIFIC REQUIREMENTS

This Cooperative Agreement requires the Recipient to support MCAS Yuma’s cultural resources programs through the creation of a Traditional Cultural Landscape Study on the Barry M. Goldwater Range West, including the following:

Base Period

- Prior to any field work, the Recipient shall submit an Accident Prevention Plan/Activity Hazards Analysis (APP/AHA). The APP/AHA shall be prepared in accordance with the U.S. Army Corps of Engineers (USACE) Safety and Health Requirements Manual, EM 385-1-1. Minimum requirements are outlined in USACE EM 385-1-1, Appendix A, “Minimum Basic Outline for Accident Prevention Plan.” The APP/AHA shall be specific to this project and address any unusual or unique aspects of this project.
- Prior to any field work, the Recipient shall submit a Work Plan. The Work Plan may be combined with the APP/AHA into a single document. The Work Plan shall be a written research strategy tailored to the specific type of service requested in the Task Order and will include confidentiality measures. The work plan shall, at a minimum, include an introduction, environmental setting, cultural setting, historic context, preliminary records and literature search results, descriptions of previous investigations, proposed methodology, list of personnel and a description of the roles they will fill, detailed resumes outlining their qualifications, and a detailed schedule using MS Project report format with milestones and dates for completion of services requested by each Task Order for each specific task and associated deliverables.
- The Work Plan shall first be delivered as an electronic draft for internal DOD review. The Recipient shall begin field work within 10 days after Government approval of the final Work Plan. Two electronic copies will be submitted of the draft and final versions.
- The Recipient will work with the Native American communities associated with the US/Mexico border region of the BMGRW (listed below) through documentation of their historical and contemporary associations with the landscape. The scope of this task is limited to US Indian tribes; however, these tribes will be encouraged to invite and include their Mexican counterparts whenever feasible.

Ak-Chin Indian Community
Cocopah Tribe
Colorado River Indian Tribes
Fort Mojave Indian Tribe
Gila River Indian Community
Hia-Ced Hemajkam
Hopi Tribe
Quechan Tribe
Salt River Pima Maricopa Indian Community
Tohono O'odham Nation Yavapai-Apache Nation
Yavapai-Prescott Tribe
Zuni Tribe

- In coordination with the IR, the Recipient will prepare a draft letter of invitation to the tribes.
- The Recipient will conduct a comprehensive literature review to identify properties of traditional, religious, and cultural significance, and will incorporate this information into an overview. The overview will also include any tribal information contained in previously published research. These data will be described in a narrative that explains the context and association of any sites. Tables and figures will be presented within the text to summarize information and evaluate not only what was previously learned and published, but also to recognize gaps in the documentary record that could be productively filled with additional research.
- In coordination with the IR, the Recipient will prepare a draft questionnaire for approval by the participating tribes.
- The Recipient, in coordination with the IR, will plan, schedule, and conduct presentations ($n \leq 10$), field trips ($n \leq 4$) and structured oral interviews ($n \leq 30$) with cultural representatives, leaders, and advisors for the associated tribes. Working closely with the IR, the Recipient will develop questionnaires to generate discussion among participants in the tribal meetings and to elicit specific information regarding the tribes' connections to the US/Mexico border region of the BMGRW that is not available in the existing documentary record. Full documentation of identified traditional cultural properties, sacred sites, and places of cultural significance will result from this effort. The information obtained from this study should be incorporated into the report, with a separate section for each tribe. For resources identified during these conversations, a map will be produced that shows locations of the sites within the study area.
- The Recipient will endeavor to garner Native American understandings and interpretations of the cultural resources and landscape of the US/Mexico border region of the BMGRW - and the interrelationships among them - that can inform archaeological research and interpretations. Items should include, but not be limited to:
 - place names for mountains and other landforms in the study area
 - traditional names for the Colorado River
 - stories or traditions tied to the study area
 - plants, minerals, or other natural and biological resources known from the area
 - any villages or trails in the vicinity
 - any ceremonies or gatherings conducted in the vicinity

- The Recipient will provide drafts of these synthesized sections to the POCs for each participating tribe, who will be asked to review their respective section for accuracy, thoroughness, and sensitivity.

The Recipient shall provide information on impacts to each of the resources identified. Additional recommendations regarding studies and/or protective measures shall be developed for the sites recommended as eligible under this program.

- Option Period One The Recipient will work with the Native American communities that contributed to the Traditional Cultural Landscape Study during the base period of performance, to locate and document the resources identified.
- The Recipient will investigate the locations of tribal resources identified by the tribes during the Landscape Study through the use of aerial photography and LiDAR of the Study area, as well as ground-truth of the findings. The Recipient will utilize Tribal Monitors, when practical, to conduct pedestrian surveys and/or aid in locating identified tribal resources.
- In coordination with the IR, the Recipient will prepare a draft letter of invitation to the tribes.
- The Recipient will produce a professional Draft Report that synthesizes the results of all research performed during the option period.
- The Recipient will produce a professional Final Report that synthesizes the results of all research performed during the option period and incorporates tribal and Government comments on the Draft Report.
- The final report shall be a publishable quality monograph that shall conform to general practice in the profession and all Arizona and MCAS Yuma standards and guidelines and the SUBMITTALS section in the base Cooperative Agreement.

In accordance with the Californian, Desert Southwest, Great Basin, Colorado Plateau, and Pacific Northwest Cooperative Ecosystem Studies Unit Cooperative (CESU) and Joint Venture Cooperative Agreement, Article II. Statement of Work, the CATR agrees to provide substantial involvement to include, but are not limited, the following:

- NAVFAC SW CATR is involved in the development of study methodology, data gathering, analysis, and/or report writing.
- NAVFAC SW CATR actively participates and collaborates in carrying out the project plan of work and review.
- NAVFAC SW CATR incurs in-kind or direct expenditures in carrying out the activities specified in the statement of work.

I. MEETINGS/COORDINATION

1. The Recipient or his/her designee will attend (in person or via teleconference) a kick-off meeting with the CATR and Installation representatives. The CATR shall arrange the meeting. The meeting shall take place within 10 working days of the Cooperative Agreement award. The purpose of the kick-off meeting is to discuss any questions the Recipient may have regarding the Cooperative Agreement and lay out the framework for accomplishing the requirements.

2. The Recipient shall be available throughout the Cooperative Agreement period for consultation

with the Cooperative Agreement and Installation Representatives on matters involving data analysis or development of the report/manuscript. These meetings can be either face to face or via phone conference.

J. SUBMITTALS and SCHEDULES

Accident Prevention Plan

An Accident Prevention Plan shall be submitted and approved prior to the commencement of any field work (see Section M).

Monthly Reports

Recipient agrees to submit monthly electronic reports within one week after the end of each month. The reports shall provide a description of the work accomplished during the reporting period, including any challenges encountered and recommendations.

Final Reports (Draft and Final)

Draft Traditional Cultural Landscape Study: The Contractor shall prepare a draft report. The draft report shall be a polished product and an accurate representation of the final report, with graphic and tabular material in the same size, format, and general location as they will be in the final technical synthesis report. The draft report shall essentially be a complete document that is a publishable quality monograph that has already been edited. Two bound copies and two electronic copies in Microsoft Word format of the draft report and draft site records shall be submitted to the Government. One CD or DVD with the GIS database specifications listed in Section 10, below, will be submitted with the draft report. The report shall adhere to the format standards described in Standards for Documents Submitted for SHPO Review (see hyperlink above) with the following exceptions/additions:

Report Section	Change
<i>Limited Distribution Statement</i>	To be printed on the front cover of report: Distribution and reproduction of this document is not authorized. Requests for copies shall be referred to the Range Management Department, MCAS Yuma, Arizona.
<i>Survey Findings</i>	Sites will <u>not</u> need to be evaluated for eligibility to the <u>Arizona</u> Register of Historic Places.
<i>Tabular Data</i>	Property name/address will not be needed and all UTM's will be reported using NAD 83 and the zone in which the site or resource is located; Zone 11 or Zone 12.
<i>References/Bibliography</i>	The References Cited section of the report, as well as in-text reference citations, shall follow Society for American Archaeology (SAA) Journal Style Guide.

Final Traditional Cultural Landscape Study: The final report shall incorporate the

Government and tribal review comments and accept all changes in the Microsoft Word document submitted to the Recipient. If any changes appear to be erroneous, the Recipient shall discuss them with the Government for clarification. If there is a disagreement regarding comments, the Recipient shall meet with the Government to resolve differences. If the disagreement cannot be resolved, the Government comments will be incorporated. The Government may request an electronic copy screen check prior to the printing of the final technical synthesis report.

The final report shall be a publishable quality monograph that shall conform to general practice in the profession and all Arizona and MCAS Yuma standards and guidelines mentioned above. The text shall be typed or printed, and single spaced, in a one column format.

All maps and drawings shall be professionally drafted. Maps shall have a legend that is clear and readable, including such information as the scale, north indication, and symbol identification. All maps indicating resource locations shall be depicted on USGS 7.5' topographic maps with appropriate legend. The Recipient shall ensure that those maps print at the 1:24,000 scale. Features to be illustrated (site locations, site features, artifacts, etc.) must stand out clearly against the other features on the map.

Photographs in the report shall be digital color photos and may be cropped to remove extraneous sky or photographer shadows. A caption shall be typed for each photograph and will include the subject of the photo and the direction or view (e.g., facing east, planview, close-up). As much as possible, photographs should be sized to fit two photographs (in landscape layout) and their captions on a single page.

The Recipient shall submit two copies of the final report, in letter quality typescript and ready for reproduction by photo-optical copying on 8.5 by 11 inch paper (except for those pages that may be 8.5 by 17, 22, or 34 inch foldout figures) bound in three ring binders. Fifteen (15) DVDs and fifteen (15) spiral or comb bound copies of the final report shall also be submitted to the Government.

The final Data Compendium submitted to the Government on a DVD shall include a publication-ready copy of the complete report in Microsoft Word 2010 and PDF formats; individual site records saved with the BMGRW site number as the filename in both Microsoft Word and PDF; scanned PDF copies of all field notes; digital photographs with a final photo log (on a single spreadsheet). Final GIS data, according to the Geospatial Data Requirements detailed in Section 10, shall be submitted on a separate DVD.

SCHEDULE

6.1 The schedule for submittals and milestone dates is as follows.

Deliverables	Copies	Schedule
Draft Invitation Letter to Tribes; Work Plan and APP/AHA	1 Word doc.;	30 Calendar Days after kick-off meeting.
Pre-Draft Overview – Chapters 1-2	1 Word doc., 1 PDF, 1	90 Calendar Days after kick-off meeting.

Deliverables	Copies	Schedule
	Comment Matrix	
Draft Overview – Chapters 1-2	15 hard copies with CDs to include Word doc., PDF, & Comment Matrix	30 Calendar Days after receipt of government comments on Pre-Draft Overview.
Pre-Draft Synthesis – Chapter 3 individual sections	1 PDF & Comment Matrix of each Tribe’s section; 1 PDF & Comment Matrix to MCASY	180 Calendar Days after kick-off meeting.
Draft Synthesis – Chapter 3 including tribal revisions	1 Word doc., 1 PDF, 1 Comment Matrix	30 Calendar Days after receipt of government/tribal comments on Pre-Draft Synthesis.
Draft report	15 hard copies with CDs to include Word doc., PDF, & Comment Matrix	30 Calendar Days after receipt of government comments on Draft Synthesis.
Final report, bound copies	15	
Electronic copy of final report	15 DVDs	
3-ring binder bound copy of final report with DVD included	2	30 days after receipt of government/tribal comments on Draft Report
Data compendium	1 or more DVDs	
GIS database	1 DVD	
ASM Project Registration Form	1	Upon receipt from ASM as final deliverable

Geospatial Data Requirements: The Recipient shall provide, as part of the deliverables for this project, all site and survey data per the instruction in Appendix C.

At the end of the 24-month base-period of the Cooperative Agreement and at end of the Option Period, if exercised, the Recipient shall compile an interim year-end report using all of the monthly reports, analyses, data, and recommendations performed under this Cooperative Agreement. The report shall be free of grammatical, spelling, and typographic errors. The CATR may reject the draft if the quality of the report (i.e., writing and presentation) is not professional in content or appearance.

K. DATA AND PUBLICATION

1. This Cooperative Agreement is subject to, and Recipient shall comply with, 2 CFR 200.315 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 Cooperative Agreement and authorize others to receive, reproduce, publish, or otherwise use such data for Federal purposes. The Department of the Navy (DoN) acknowledges and agrees that the Recipient's fundamental consideration in performing the research under this Cooperative 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 Cooperative Agreement to the DoN 14 days prior to the submission of the work mentioned above.

2. The acknowledgements for any paper or presentation resulting from this work shall include the following statement: "This work was funded by Marine Corps Air Station Yuma."

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

4. Any publications resulting from this work shall comply with any Tribal Requests of confidentiality of data, the Archaeological Resources Protection Act (ARPA), or any request by the government agency for confidentiality of Tribal data.

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

L. 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 at the Installation and Public Affairs Officer at NAVFAC SW through the MCAS Yuma and CATR.

M. SAFETY

The Recipient will be required to develop an Accident Prevention Plan (APP) following the format in Appendix A of the EM 385-1-1, US Army Corps of Engineers Safety & Health Requirements Manual, 30 November 2014 or latest edition. The government CATR will contact the SW EV Safety Office to check if the project may qualify for the Abbreviated APP, prior to directing the recipient to prepare an APP. Additional specific plan or plans is/are required if the project involves work that is potentially hazardous. List of specific plans is located at section (i) of Appendix A of the EM 385-1-1. Potentially hazardous activities include, but are not limited to:

- soil boring or digging test pits (excludes manual collection of de minimis surface soil samples)
- 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
- work within 10 ten feet of high voltage lines, or high pressure gas, steam, or water lines

A Site Safety and Health Plan (SSHP) is also required if the work involves potential exposure to hazardous, toxic or radioactive waste (HTRW). The minimum requirement for the SSHP is in Section 33 of the EM 385-1-1. Include an Activity Hazard Analysis (AHA) for all tasks reasonably anticipated to be performed as part of this scope of work. Format and instructions for the AHA is in section 1 of the EM 385-1-1. As a minimum, references used to develop the APP, SSHP and AHA are: EM 385-1-1 (or latest addition), and Local Activity safety plans and standard operating procedures. When developing the APP, SSHP and AHA, address all sections that are deemed appropriate for performing the work in this CA, while ensuring a safe work environment for all personnel involved. The draft APP, SSHP and AHA have to be reviewed by the Government Designated Authorities (SW EV Safety Office, CATR, ROICC/FEAD) prior to start of field work activities.

NOTE: AHA is an attachment required by the APP. SSHP is also an attachment required by the APP if a project includes potential exposure to HTRW. Government CATR should verify with the SW EV Safety Office prior to directing the recipient to prepare a SSHP.

The APP, SSHP and AHA will provide a safe and healthful environment for all personnel involved as well as personnel working near the sites for the DoD. The Recipient shall certify to CATR that the final APP, SSHP and AHA have been reviewed with each Recipient employee working on this Cooperative Agreement prior to mobilization and start of fieldwork activities.

A Draft and Final APP, SSHP and AHA will be submitted concurrently with the Work Plan but shall be printed under a separate cover from the Work Plan. The final APP, SSHP and AHA shall be immediately accessible to the Site Safety and Health Officer (SSHO) 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. The SSSH is required to have completed the 10-hour OSHA Safety Training.

Man-hour reporting is also required by the EM 385-1-1 and the Unified Facilities Guide Specifications (UFGS) -01 35 26, (February 2012) change 2, 08/13. The recipient will provide a Monthly Exposure Report (MER) and will attach this report to the quarterly (or other specified interval) billing request. The CATR will submit a copy of the MER to the SW EV Safety Office.

Site Assist Visit (SAV). While the recipient is performing the job on-site, a SW EV Safety representative may perform an SAV. The recipient is required to comply with the contents of the final APP (with the AHA and/or SSHP, as applicable). Any modifications to the APP shall be approved first by the GDA prior to continuing work. Also the recipient has to comply with the requirements of the Section 1, Program Management, of the EM-385 -1-1, while at the job site.

N. HOLD HARMLESS

1. The US 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 US Government property by the Recipient, its officers, agents, servants, employees, or invitees, the Recipient, at the election of the US Government, shall promptly repair, replace, or make monetary compensation for the repair or replacement of such property to the satisfaction of the US Government.

O. INSURANCE

1. At the commencement of this Cooperative Agreement, the Recipient shall obtain, from a reputable insurance company or companies satisfactory to the US 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 therefrom, 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 US 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 US 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 US Government of written notice thereof, regardless of any prior act or failure to act or negligence of the Recipient or the US 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 this 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 pursuant to Section 2 of Attachment A to this Cooperative Agreement. (The self-insurance clause is applicable only to appropriate state and local governments and qualifying institutions of higher education who provide evidence of a self-insurance program in accordance with this Section and Attachment A, Section 2.).

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 US 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 Section O, the Recipient shall promptly give notice thereof to the US Government and, to the extent of its liability as provided in this Section O, shall, upon demand, either compensate the US 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 US Government may elect. If the cost of such repair, rebuilding, or replacement exceeds the liability of the Recipient for such loss or damage under this Section O, the Recipient shall effect such repair, rebuilding, or replacement if required so to do by the US Government, and such excess of cost shall be reimbursed to the Recipient by the US Government. In the event the Recipient shall have effected any repair, rebuilding, or replacement which the Recipient is required to effect pursuant to this Section O, the US 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 US 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 US Government the amount of such proceeds.

P. PAYMENTS

1. Partial payments equal to the amount of work accomplished may be made quarterly during the field work portion; after submittal of the draft report; and after receipt of the final report.
2. The final payment of 20 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 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.
4. Payments will be made in accordance with Defense Federal Acquisition Regulation (DFAR) 252.232-7006 Wide Area Work Flow Payment Instruction. See Attachment WAWF Instructions for instructions on payment procedures.

Q. EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT REPORTING

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

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

- (a) Unique identifier (DUNS Number) for the subcontractor receiving the award and for the subcontractor's parent company, if the subcontractor has one.
- (b) Name of the subcontractor.
- (c) Amount of the subcontract award.
- (d) Date of the subcontract award.

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

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

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

Unless otherwise directed by the Contracting Officer, by the end of the month following the month of a first-tier subcontract with a value of \$25,000 or more, and annually thereafter, the Contractor shall report the names and total compensation of each of the five most highly compensated executives for each first-tier subcontractor for the subcontractor's preceding completed fiscal year at <http://www.fsr.gov>, if

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

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

END

ATTACHMENT A

SELF-INSURANCE REQUIREMENTS FORM

INSURANCE MUST CONFORM TO ALL THE REQUIREMENTS LISTED BELOW PRIOR TO RECIPIENT BEING PERMITTED TO USE OR OCCUPY GOVERNMENT PREMISES OR PROPERTY PURSUANT TO THE COOPERATIVE AGREEMENT

1. PUBLIC LIABILITY AND PROPERTY DAMAGE

a. Required minimum amounts of insurance listed below:

\$	N/A	Fire and Extended Coverage
\$	1,000,000	Third Party Property Damage
\$	1,000,000	Third Party Personal Injury Per Person
\$	1,000,000	Third Party Personal Injury Per Accident

2. SELF-INSURANCE REQUIREMENTS: If your organization is self-insured, please provide evidence of self-insurance which meets or exceeds the insurance liability amounts in Item # 1.

The following information, written on your organization's letterhead, is also required:

- A brief description of your organization's self-insurance program, with reference to statutory or regulatory authority establishing the self insurance program.
- The name and telephone number of your organization's self-insurance program administrator.
- Reference the appropriate military facility and Cooperative Agreement number.

3. IF YOUR SELF-INSURANCE PROGRAM DOES NOT MEET THE ABOVE MINIMUM REQUIREMENTS:

• Provide evidence of Excess Liability Insurance in the amount necessary to meet or exceed the minimum requirements in Item #1 above.

• The following endorsements are required for Excess Liability insurance policies:

a. "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."

b. "The Commanding Officer, Naval Facilities Engineering Command San Diego, CA shall be given thirty (30) days written notice prior to making any material change in or the cancellation of the self insurance program."

c. "The United States of America (Department of the Navy) is added as an additional insured in operations of the policyholder at or from the premises licensed/leased from the United States".

d. "This insurance certificate is for use of facilities at Marine Corps Air Station Yuma under this Cooperative Agreement, No. N62473-20-2-0017."

4. NOTICE: "RIGHT TO USE" DOCUMENTS WILL NOT BE FULLY EXECUTED UNTIL CERTIFICATE IS RECEIVED WITH PROPER ENDORSEMENTS.

**ATTACHMENT A
NON SELF-INSURED REQUIREMENTS FORM**

**INSURANCE MUST CONFORM TO ALL THE REQUIREMENTS LISTED BELOW
PRIOR TO RECIPIENT BEING PERMITTED TO USE OR OCCUPY US
GOVERNMENT PREMISES OR PROPERTY PURSUANT TO THE COOPERATIVE
AGREEMENT**

1. PUBLIC LIABILITY AND PROPERTY DAMAGE

a. Required minimum amounts of insurance listed below:

\$	N/A	Fire and Extended Coverage
\$	1,000,000	Third Party Property Damage
\$	1,000,000	Third Party Personal Injury Per Person
\$	1,000,000	Third Party Personal Injury Per Accident

**2. THE CERTIFICATE OF INSURANCE MUST CONTAIN THE FOLLOWING
ENDORSEMENTS:**

a. "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."

b. "The Commanding Officer, Naval Facilities Engineering Command, Facilities Engineering Command, shall be given thirty (30) days written notice prior to making any material change in or the cancellation of the policy."

c. "The United States of America (Dept. of the Navy) is added as an additional insured in operations of the policyholder at or from the premises **licensed/leased** from the United States."

d. "This insurance certificate is for use of facilities at Marine Corps Air Station Yuma under this Cooperative Agreement, No. N62473-20-2-0017."

e. Loss, if any, under this policy shall be adjusted with Recipient and the proceeds, at the direction of the US Government, shall be payable to Recipient, and proceeds not paid to Recipient shall be payable to the Treasurer of the United States of America."

**3. NOTICE: "RIGHT TO USE" DOCUMENTS WILL NOT BE FULLY EXECUTED
UNTIL CERTIFICATE IS RECEIVED WITH PROPER ENDORSEMENTS.**

ATTACHMENT B WAWF INSTRUCTIONS

252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (JUN 2012)

(a) Definitions. As used in this clause--

Department of Defense Activity Address Code (DoDAAC) is a six position code that uniquely identifies a unit, activity, or organization.

Document type means the type of payment request or receiving report available for creation in Wide Area WorkFlow (WAWF).

Local processing office (LPO) is the office responsible for payment certification when payment certification is done external to the entitlement system.

(b) Electronic invoicing. The WAWF system is the method to electronically process vendor payment requests and receiving reports, as authorized by DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports.

(c) WAWF access. To access WAWF, the Contractor shall--

(1) Have a designated electronic business point of contact in the Central Contractor Registration at <https://www.acquisition.gov>; and

(2) Be registered to use WAWF at <https://wawf.eb.mil/> following the step-by-step procedures for self-registration available at this Web site.

(d) WAWF training. The Contractor should follow the training instructions of the WAWF Web-Based Training Course and use the Practice Training Site before submitting payment requests through WAWF. Both can be accessed by selecting the "Web Based Training" link on the WAWF home page at <https://wawf.eb.mil/>.

(e) WAWF methods of document submission. Document submissions may be via Web entry, Electronic Data Interchange, or File Transfer Protocol.

(f) WAWF payment instructions. The Contractor must use the following information when submitting payment requests and receiving reports in WAWF for this contract/order:
N62473-20-2-0017.

(1) Document type. The Contractor shall use the following document type(s).

NAVY CONSTRUCTION/FACILITIES MANAGEMENT INVOICE

(2) Inspection/acceptance location. The Contractor shall select the following inspection/acceptance location(s) in WAWF, as specified by the contracting officer.

(3) Document routing. The Contractor shall use the information in the Routing Data Table below only to fill in applicable fields in WAWF when creating payment requests and receiving reports in the system.

Routing Data Table*

Field Name in WAWF	Data to be entered in WAWF
Pay Official DoDAAC	N68732
Issue By DoDAAC	N62473/ECOMP
Admin DoDAAC	N62473/ECOMP
Inspect By DoDAAC	N62473/ECOMP
Ship To Code	N/A
Ship From Code	N/A
Mark For Code	N/A
Service Approver (DoDAAC)	N/A
Service Acceptor (DoDAAC)	N62473/ECOMP
Accept at Other DoDAAC	N/A
LPO DoDAAC	N62473/ECOMP
DCAA Auditor DoDAAC	N/A
Other DoDAAC(s)	N/A

(4) Payment request and supporting documentation. The Contractor shall ensure a payment request includes appropriate contract line item and subline item descriptions of the work performed or supplies delivered, unit price/cost per unit, fee (if applicable), and all relevant back-up documentation, as defined in DFARS Appendix F, (e.g. timesheets) in support of each payment request.

(5) WAWF email notifications. The Contractor shall enter the email address identified below in the “Send Additional Email Notifications” field of WAWF once a document is submitted in the system.

NAVFAC_SW_ECOMP_inspector@navy.mil

joseph.baumann@navy.mil

(g) WAWF point of contact.

(1) The Contractor may obtain clarification regarding invoicing in WAWF from the following contracting activity's WAWF point of contact.

(2) For technical WAWF help, contact the WAWF helpdesk at 866-618-5988.

(End of clause)

Please visit the link below for specific line item payment.

https://www.acq.osd.mil/dpap/dars/pgi/pgi_hm/current/PGI204_71.htm#payment_instructions

ATTACHMENT C Specifications for Geospatial Data

SPECIFICATIONS FOR GEOSPATIAL DATA: The Contractor shall develop GIS feature classes to Government provided specification. Specifications for all required geospatial data deliverables may be found in the following sections.

1.0 Database Files: The Marine Corps standard computing software is Microsoft Office 2010. Databases shall be provided in file geodatabase format, unless specified otherwise, as approved by the Government. All text, spreadsheet, and database files, to include aerial photography, shall be delivered on a Compact Disk read-only memory (CD-ROM) or Digital Versatile Disc read-only memory (DVD-ROM). Drafts for review may be delivered via the Government AMRDEC SAFE (Safe Access File Exchange) system.

<https://safe.amrdec.army.mil/safe>

2.0 Maps, Drawings, Sketches and Aerial Photography (Digital Geospatial Data):

2.1 Geospatial Data Software Format: Geographic data (vector and raster) **must** be provided in a form that does **not** require translation, preprocessing, or post processing before being loaded to the Installation's centrally hosted geodatabase. The Contractor shall validate any deviation from this specification in writing with the Government (Department GIS Manager via the Project Manager).

2.1.1 GIS (Feature Classes): All feature classes shall be provided in file geodatabase format using ArcGIS 10.1 software. The geodatabase must be importable to a multi-user geodatabase using ArcSDE 10.1. The delivered feature classes shall be provided with x, y domain precision of 1000 (unless otherwise identified by the Installation). Feature classes shall be in the same projection and use the same coordinate system, datum, and units as stated below in the paragraph titled Geospatial Data Projection.

(NOTE: ArcGIS and ArcSDE are geographic information system software produced by the Environmental Systems Research Institute (ESRI) of Redlands, California. This software is used by the Marine Corps GEOFidelis Program)

2.2 Geospatial Data Structure:

2.2.1 GIS (Feature Classes): When developing/delivering geospatial data, the Contractor shall develop the initial structure consistent with the most current version of the GEOFidelis Data Model. The GEOFidelis Data Model shall be followed for geospatial database table structure, nomenclature, and attributes. The Contractor shall consult with the Government concerning modifications or additions to the GEOFidelis Data Model. The Government may approve modifications to the GEOFidelis Data Model if it is determined that the GEOFidelis Data Model does not adequately address subject datasets. If further modifications to structure are required as a result of this Scope, the Contractor will consult with the Government (IGI&S Manager) for direction and final approval. It should be noted that the Contractor may request the Government provide the Contractor with the correct feature class schema. The Government will provide this in the form of an empty geodatabase.

2.2.1.1 Required Feature Classes: The Contractor shall develop all required GEOFidelis SDSFIE 3.0 GIS feature classes to depict all changes to existing survey areas, site boundaries, and isolated occurrences, as well as any others deemed necessary by the MCAS Yuma Project Manager.

2.2.1.2 Required Feature Class Attribution: The contractor shall be responsible for ensuring

submitted feature classes are populated with all required MCAS Yuma feature class attribution. Specifications for attribute population may be obtained from the MCAS Yuma Range Department GIS Manager.

2.3 Geospatial Data Projection: Geographic data (regardless of format) shall be provided in **International Feet** and **projected** into the **Arizona West State Plane, FIPS Zone 0203** projection system. The maps and data shall use the GRS 1980 spheroid and the North American Datum 1983. This projection requirement applies to all GIS data layer deliverables as well as all CAD drawings such as as-designed and as-built project plans. Each data set shall have a projection file if appropriate based on format. 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

2.4 Geospatial Data Collection: Mapping grade Global Positioning System (GPS) data collection shall be performed to develop all site data. Mapping grade GPS data collection shall at a minimum use the Geoid2003 CONUS epoch (or a more current epoch if available at the time of this project). All site boundaries must be within ± 5 meters horizontal and all site datum points must be within ± 1 meter. Every effort shall be made to capture feature locations without using offsets unless obstructions are present. Any offsets used shall be annotated in the "user flag" field. The horizontal accuracy will be compiled, tested, and reported in accordance with Part 3 of the Federal Geographic Data Committee's Geospatial Positioning Accuracy Standards: the National Standard for Spatial Data Accuracy (NSSDA). Spatial accuracy will be reported at the 95% confidence level. The spatial accuracy standard is available at: <http://www.fgdc.gov/standards/projects/FGDC-standards-projects/accuracy/part3/chapter3> (NOTE: Raw GPS data collection information is not to be included in the table structure of the delivery, unless it is specifically part of the GEO*Fidelis* Data Model, established Installation feature format, or specifically requested by the Government.)

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

2.6 Geographic Data Documentation (Metadata): For each digital file delivered containing geographic information (regardless of format), **the Contractor shall provide documentation** consistent with the 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. 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 and version 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.
- Type of data layer (point, line, polygon, etc.).
- Field names of all attribute data and a description of each field name.
- Definition of all codes used in the data fields.
- Ranges of numeric fields and the meaning of these numeric ranges.
- The creation date of the map layer and the name of the person who created it.
- A point of contact shall be provided to answer technical questions.

Metadata generation tools included in the ArcGIS suite of software (or equivalent technology) shall be used in the production of the required metadata in XML format. Regardless of the tools used for metadata creation, the Contractor must ensure that the metadata is delivered in XML format and can be easily imported to the Installation's enterprise geodatabase. Copies of the FGDC metadata standard can be obtained on the Internet at <http://www.fgdc.gov> or by contacting:

FGDC Secretariat
 c/o U.S. Geological Survey
 590 National Center
 Reston, Virginia 22092
 (703) 648-5514

Additionally, the metadata will meet all requirements per the MCAS Yuma Metadata Authoring Guide, currently 3.0 dated January 2013. This document will undergo revision to reflect changes from ArcGIS 9.3.1 to 10.1.

2.7 Geographic Data Review: The digital geographic maps, related data, and text documents shall be included for review in the draft and final contract submittals. The data will be analyzed for discrepancies in subject content, correct format in accordance with these specifications, and compatibility with the existing GIS system. The Contractor shall incorporate review comments to data and text prior to approval of the final submittal. For each review of digital geospatial data deliverables, the Contractor shall provide a technical consultant to be available by telephone, email, web conference, or when practical, on-site at MCAS Yuma with the GIS Manager and functional area subject matter experts to visually review the data deliverables on a Windows 7 compatible system unless otherwise approved by the Government.

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

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

Jonathan Gholson, YRMD GIS Manager
151 ONeill St, Yuma, AZ, 85369
(928) 269-3115
jonathan.gholson.civ@usmc.mil

ATTACHMENT D
Marine Corps Air Station Yuma
Archaeological Survey and Report Standards

Marine Corps Air Station Yuma
Archaeological Survey and Report Standards

To Supplement Arizona State Museum “Archaeological Site Recording Manual”, “Standards for Inventory Documents Submitted for SHPO Review in Compliance with Historic Preservation Laws”, and “Arizona Reporting Standards for Cultural Resources” for all Archaeological Survey’s Performed in Arizona for Marine Corps Air Station (MCAS) Yuma

and

To Supplement California OHP “Instructions for Recording Historical Resources” and “Archaeological Resource Management Reports (ARMR): Recommended Contents and Format” for all Archaeological Surveys Performed in California for MCAS Yuma

January
2016

Point of Contact for Questions:
Karla James, M.A., Archaeologist karla.james@usmc.mil
928-269-2288

1. Prior to Fieldwork

If not provided at onset of task, contractor will request current versions of the relevant digital datasets held by MCAS Yuma. These are continually being updated and it will save rewrites later if you work from the most recent authoritative data.

Contractor will thoroughly review all reports for previous surveys in the vicinity of the survey area so that they have an understanding of the prehistoric and historical archaeology of the area and survey methods executed during previous surveys in the area.

Contractor will supply the necessary documentation to schedule range access at least two weeks prior to beginning field work. All field-crew members will be required to attend the range safety and security brief before beginning field work.

Check Bureau of Land Management (BLM)/General Land Office (GLO) maps and other historic maps for any historic period roads, mines, homesteads, etc. Contractor is also expected to check BLM grazing allotment information if there are relevant historic sites found during the survey.

2. In The Field

GPS Data Collection

GPS data will be collected in North American Datum (NAD) 83, in the UTM zone for the location at which the data will be collected. The settings on the GPS unit will be verified each day before data collection begins. During each day of data collection, an accuracy assessment will be performed on the data collected that day. At a minimum, the accuracy assessment will consist of either 1) collecting a data point for each of at least three survey monuments (GLO markers, etc.), near the location where data will be collected that day, or 2) downloading the data to a computer with post-processing software (Pathfinder, Trimble Positions, etc.), performing differential correction, and printing out an accuracy report for that day's data collection. If the accuracy assessment shows that the day's data do not meet the accuracy standards in the SOW, the data must be re-collected.

Survey

The entire survey area will be surveyed except for slopes greater than 40 percent, unless stated otherwise in the contract. Contractor will do site updates and new site records for specified previously recorded sites in the survey area, to include updated GIS data such as site datum and site boundary.

Arizona

Distance between transects will be maintained at 20 meters or less, depending on the ground visibility.

80-100 percent ground visibility transects will be no more than 20 meters apart

Below 80 percent ground visibility transects will be no more than 15 meters apart

California

Distance between transects will be maintained at 15 meters or less, depending on the ground visibility.

Recording Sites and Isolated Occurrences

Trails

MCAS Yuma ranges are home to wild animals that have roamed the ranges for decades. These animals have created many trails of their own and have also used human-made trails. In order to avoid having to manage animal trails as cultural resources, use the following guidelines when determining whether a trail is animal- or human-made:

- Animal trails are often narrow and one can see that it would be difficult, if not impossible, for a human to walk with their feet so close together.
- Human trails are generally straighter than animal trails, though this is not always so.
- Animal trails often follow the contour of a hill/mountain whereas human trails are more likely to go up and over or around these features.
- Human trails will usually have artifacts or features somewhere along them, though not always.
- If a trail has plants such as ocotillo or creosote bush growing in them and there are no visible routes bypassing the plants, this is a good indication of age and possible human origin/use.

Prehistoric trails that are 100 or more meters long will be recorded as linear sites; whereas, those less than 100 meters will be recorded as isolated occurrences (IOs). All artifacts and features near trails will be recorded with a set of coordinates for each (Easting and Northing in NAD83, UTM Zone 11 or 12), the only exception being a situation where there are numerous artifacts within a five-meter diameter. Those locations will, however, be detailed in the field notes.

Prehistoric trails will be recorded with one person capturing GPS data while walking the trail and keeping the GPS receiver as close to the centerline of the trail as possible. In addition, there will be one person on either side of the trail at a distance of no more than five meters, closely examining the ground for artifacts and features. Often in areas along trails where several sherds are found, there will be an intersecting or branching trail. Examine the ground spanning out from the trail in all directions where ceramics are found along a trail. Look closely in the vicinity of any trails as they go into or come out of a wash because these locations are often marked with ceramics.

In areas where ceramic sherds appear to be in a linear or curvilinear pattern, a closer examination of the area for evidence of trails will be performed.

Before field work is completed, pull trail GPS data into GIS with DOQ or other aerial imagery and examine the trajectory of both ends of all trails to see if more of each trail is visible so that they can be followed and recorded to at least the survey boundary.

Before field work is completed, pull the ceramic GPS data into GIS with DOQ or other aerial imagery and see if any trails are visible in areas where ceramics occur in a linear trajectory.

Roads

Unfortunately, MCAS Yuma's ranges have fallen victim to significant cross-country travel throughout its history, and there are numerous roads, trails, and two-tracks across the ranges. If any such features have little or no associated artifacts by which to date them, or if they do not

appear on any historical GLOs or other maps, they will not be recorded. Historical roads more than 100 meters long will be recorded as linear sites whereas those less than 100 meters will be recorded as IOs.

Rock Features

All rock features will be described in terms of cobbles (less than 10 inches in diameter) and boulders (greater than 10 inches in diameter).

When recording rock rings or alignments, note presence or absence of caliche on exposed and buried surfaces.

Note if the rocks are laying on the surface or to what degree they are embedded.

If rock rings are on desert pavement, note whether the area within the ring is cleared of desert pavement or is the same as the surrounding area.

Rock feature (e.g. cairn, ring, alignment) descriptions will include approximate number of cobbles and/or boulders, number of courses, height and base diameter measurements, and any other attributes that might indicate whether the feature is historical or prehistoric.

Historical period military defensive positions will include description of shape (e.g. half circle, u-shaped), and number of courses.

Cleared Areas (aka "Sleeping Circles")

There are myriad cleared areas on MCAS Yuma ranges that have natural causes such as plant scars and burro wallows. There are also many cleared areas created by munitions detonations. Any cleared areas recorded as prehistoric cultural features must meet the following criteria:

1. Be circular in shape.
2. Have a well-defined rim.
3. Rim must be more than one stone thick.
4. Does not have unpatinated gravel interior if it is not present in the surrounding matrix.
5. Is associated with artifacts or other features indicating human activity.

See McAuliffe and McDonald (2004) and McDonald et al. (2006) for more information.

Ceramics

If field crew is not experienced and knowledgeable in typing Patayan ceramics, just record all the pertinent attributes of the sherds: temper, thickness, fracture, finish, surface color, oxidation, form, decoration, etc. Take a close-up photo of a fresh break on a representative sample of sherds. Rim profiles of all rim sherds will be drawn, and mouth diameters will be determined, if sherd is large enough to accomplish this.

Flaked Stone

If possible, discern what type of core the flakes originated from (e.g., bifacial flake core, single platform core). Note if flakes are "cortical," "partly cortical," or "non-cortical" and give counts or estimates of each type. If other flaked stone technological information can be discerned, include that information as well. Describe material type, e.g. good quality chert, poor quality jasper.

In the simplest terms possible, describe the color of the artifacts, e.g. brown, tan, red, and not purplish/reddish/fuchsia.

Scaled sketches will be made of all projectile points.

Historical Period Artifacts

For measurements of cans use the whole number equivalents (4 $\frac{3}{4}$ inches expressed as 412, 5 $\frac{1}{2}$ inches expressed as 508). For sites and IOs containing historical can dumps or other trash deposits, a general statement about the concentration and an estimated number of artifacts will suffice:

Can concentration consists of approximately 20 crushed #10 cans, 50 whole or partial milk cans with "punch here" embossed on the lid, and 100 sanitary cans.

When recording sites with numerous shell casings, record the various head stamps and overall count estimate. This is a military reservation and has been so for many years. Detailed information about shell casings is a waste of time and is of no scientific value. We do not need itemized lists of these artifacts and a general statement will suffice:

Approximately 100 30.06 shell casings with head stamps "LC 44", "UT 42", and "TC 43".

Unidentifiable pieces of metal that are scattered across the range do not need to be recorded as IOs.

Recording Methods

Ensure that photographs are taken facing a direction where the sun does not produce a glare in the frame. As much as is possible, try to not have any feet, portions of other surveyors, footprints, photographer shadows, backpacks, vehicles, etc., in the photographs. If necessary, crop the photographs before putting them in the report. Do not ever photograph any training troops or facilities unless it is specifically called for in the contract.

At least one overview photograph of the site and one photograph of each feature will be taken at every site. Include scales and north arrows for reference. Distinguishable natural background such as mountains and slow-growing plants such as saguaros and ocotillos are also useful to help relocate sites in the future.

At least one photograph of each diagnostic lithic artifact will be taken. A selective sample of ceramic sherds at each site or IO will be photographed. Include scale for reference.

At least one photograph will be taken of each feature recorded as an isolated occurrence.

Detailed site maps will be made for each site. Include easily identifiable natural features such as saguaro, ocotillo, trees, and drainages (use different symbols for various vegetation types). Any nearby (within 20 meters) roads, trails (animal or human), and two-tracks will be depicted on the maps. Also include any areas of disturbance. Also to be included on all site record site maps: north arrow pointing to the top or side of page (not a corner), and give direction and distance to any roads within 100 meters.

Arizona

If the density and diversity of artifacts and features does not meet ASM Revised Site Definition Criteria, record the item or items as an IO. In other words:

- Any number or combination of flakes and/or cores from a single source will be recorded as an IO if there are no other artifacts or features within 15 meters.
- Any number of sherds in a single pot drop will be recorded as an IO if there are no other artifacts or features within 15 meters.
- Any single feature will be recorded as an IO if there are no associated artifacts within 15 meters or temporally associated feature within 100 meters.
- Less than 20 artifacts of any kind within a 15-meter diameter area will be recorded as an IO.
- Less than 30 artifacts of a single class (e.g., lithics, ceramics, cans), within a 15-meter diameter area will be recorded as an IO.

California

In order to obtain some consistency in the site recording methods on our two ranges in separate states, MCAS Yuma will institute the following changes to site definitions:

- Any number or combination of flakes and/or cores from a single source will be recorded as an IO if there are no other artifacts or features within 15 meters.
- Any number of sherds in a single pot drop will be recorded as an IO if there are no other artifacts or features within 15 meters.
- Any single feature will be recorded as an IO if there are no associated artifacts within 15 meters or temporally associated feature within 100 meters.
- Less than 20 artifacts of any kind within a 15-meter diameter area will be recorded as an IO.
- Less than 30 artifacts of a single class (e.g., lithics, ceramics, cans), within a 15-meter diameter area will be recorded as an IO.

3. Report

The report title will follow this format:

Archaeological Survey of XXXX Acres for the Proposed XXXX on the Barry M. Goldwater Range West, Yuma County, Arizona

Archaeological Survey of XXXX Acres for the Proposed XXXX on the Chocolate Mountain Aerial Gunnery Range, XXXX County, California

If the title is included in a page header in the report, an abbreviated version is acceptable. The complete title, however, will be included on DPR 523A Section P11. Report Citation (California) or ASM Site Card Side A Report Ref. (Arizona).

In the Methods section of the report, state the datum and projection in which the data were collected, and also state the datum and projection of the deliverables.

There should be consistent formatting of the various parts of the report: all tables should be similar, all table captions should be the same style; all figure captions should be the same style.

In addition to the *Arizona Reporting Standards and Standards for Documents Submitted to SHPO and/or Archaeological Resource Management Reports (ARMR): Recommended Contents and Format*, the following items will be included in all reports:

- The date of the final report shall be on the front cover (e.g., January 1, 2016)
- This distribution statement shall be on the front cover: Distribution authorized to U.S. Government agencies and their contractors; and federally recognized Indian Tribes for purposes of cultural resource research/investigation. Other requests for this document shall be referred to Range Management Department, MCAS Yuma, Arizona.
- At least one overview photo of each site
- At least one photo of each type of feature on each site
- All photos should be half-page size if possible
- An Isolated Occurrences table with the columns for IO Number, Description, Northing, and Easting will be included in an appendix. If the IOs are in both Zone 11 and 12, add a column for Zone, otherwise use a footnote to state the datum and UTM zone. IOs will be numbered consecutively, beginning with 1 (IO 001, IO 002, IO 003). Do not keep IO field numbers in the report (IO KJ-10-1, IO LP-10-1)
- Map(s) showing all previous surveys and previously recorded sites in the search area of current survey
- A “Previous Surveys within One Mile” (or One-half Mile) table with the columns for BMGRW or CMAGR Survey Number (or ASM Survey Number if outside BMGRW boundary; or OHP Survey Number if outside CMAGR boundary), Report Title, and Reference (e.g. Jones and Jones 2010) will be included in the Previous Research section. Those surveys falling within the current survey area will be marked in bold or italics, and explained in a footnote (e.g., **Bold** indicates surveys within current survey area).
- A “Previously Recorded Sites within One Mile” (or One-half mile) table with the columns for ASM Number in AZ or Trinomial and Primary Number in CA, Site Description, NRHP-eligibility Determinations, and Reference will be included in the Previous Research section. Those sites falling within the current survey area will be marked in bold or italics, and explained in a footnote (e.g., Note: Sites in *italics* are in the current survey area).
- Map(s) showing recorded IO locations with historical IOs having a different symbol than prehistoric IOs, at a scale where they can be neatly labeled and visible. This can be combined with the site locations map if there are few enough resources to still produce a good quality map. IO labels on the map do NOT need “IO” before the IO number, as these are redundant.
- Plan-view maps for all sites should be scaled to fit vertically or horizontally on 8 ½ by 11 paper unless the site is so large that it would be impractical. Each plan-view site map, whether in the report or as part of the site record, needs to have a legend that shows what the signs on a map symbolize and represent. If contour lines are depicted on the plan-view site map, the legend must state the contour intervals (e.g., 10-foot contours, contour interval 1 meter), or the actual elevation should be printed on the lines.
- Associated artifacts table and features table for each applicable site, with columns for Type, Count, Description (to include measurements when appropriate), and Date(s) that will fit vertically on 8 ½ by 11 paper. Columns can be combined, when feasible (e.g., dates can be in the description column).

Be sure that all maps that state 1:24,000, actually print at that scale.

Eligibility recommendations will discuss significance criteria and aspects of integrity to sufficiently convey these aspects to the reader.

Be sure formatting of dates is correct and consistent throughout the report (10,000 BC and AD 1000). Do not use CE, BCE, or BP, the only exception being radio carbon dates, which can be reported using BP.

4A. Site Cards (Arizona)

Thoroughly read the ASM Site Recording Manual and use the codes and abbreviations in there. Some of the blanks that are often filled out incorrectly include:

Proj. Name: This is the abbreviated name that you sent to ASM to acquire site numbers (e.g., *MCAS Yuma FY13 Surveys*).

Site Name: Unless the site was previously given a name, no sites will be named on MCAS Yuma.

Series: All maps used should be 1:24,000 (i.e., 7.5')

Site Size: (in Ft__ or M__) Historical period sites consisting of roads or buildings (i.e., constructed features/sites), will be reported in feet. Prehistoric and historical period military sites will be measured in meters.

Length: The length of the site is the distance between the **two most distant points** on the site perimeter.

Width: The width is the **greatest distance** between opposite boundaries, perpendicular to length.

Cntr UTM Z E N : All UTM coordinates for the site card shall be derived from the differentially corrected GPS data. Zone will be the zone in which the site is actually located, (i.e., 11 or 12). The easting and the northing will be in NAD 83 and in the zone in which the site is actually located. This will be a point as close to the center of the site as possible. For large sites, four perimeter UTM's will also be recorded. For linear sites, two end point UTM's will also be recorded (e.g. *North* and *South*). The UTM's for the location of the datum will be written in the Site Description/Remarks section. Please be sure that the data are projected in NAD 83 and the correct UTM zone when acquiring the UTM coordinates – do not attempt to acquire coordinates when the data are projected in Arizona State Plane West.

BL: For all sites on MCAS Yuma, this will be *GI*. It need only be written on the first line.

TWN RNG: If the site falls in one township and range, it need only be written on the first line.

SC: Fill this in only if it has been surveyed, do not project it. Preferably, only one section will be on each line. For long sites, however, there may need to be two or more sections on each line,

separated by commas. The Subdivisions will have corresponding separating commas.

SUBDIVISION: See paragraph two on page 22 of the ASM manual.

Side B is not to be included in the Site Record.

Side C Artifacts: Read and follow the instructions on page 27 and 28 of the ASM manual, with the following exception. SHPO will no longer accept artifact counts using the plus symbol (e.g., 200+), and they must be a range instead (e.g., 200-250). Exact counts for small numbers and *P* for present for artifacts such as nails or crown caps are also acceptable.

Sides C and D Features: Read and follow the instructions on pages 29-31 of the ASM manual. If there are no features listed on Side D, delete that page from the Site Record.

Put photos, rim profiles, and other supplementary information into site cards as much as possible.

4B. Site Cards (California)

Thoroughly read the OHP *Instructions for Recording Historical Resources* and use the codes and abbreviations as instructed. Put photos, rim profiles, and other supplementary information into site cards as much as possible. The blanks that MCAS Yuma has specific instructions for are:

DPR 523A Primary Record

***Resource Name or #: (Assigned by recorder)** - Sites and IOs recorded on land managed by MCAS Yuma will not be named. The field recording number will be indicated here.

***P7. Owner and Address:** - All sites recorded within the CMAGR will have the following owner address:

Marine Corps Air Station Yuma
Range Management Bldg. 151
Yuma, AZ 85369

***P11. Report Citation:** - For newly recorded sites, this will be the author(s) name(s), year that report is finalized, and the full report title.

DPR 523C Archaeological Site Record

***A8. Nearest Water** - Do not list the Coachella Canal. This is for the nearest natural fresh water source or probable former source. "Unknown" is an acceptable response.

DPR 523J Location Map

After the map has been inserted into the document, do a test print and measure the map to ensure that it prints at 1:24,000.

5. Data Compendium (One of the final deliverables)

A CD or DVD with the following folders (separate DVDs can be created if necessary):

Folder 1: Photographs

All photos in a single electronic folder saved as JPEGs with all photos listed on a single Microsoft Excel photo log to be included in the same folder. On the photo log, photos must be organized and filed by project area and site number/IO number as much as possible, not by field date, field director, or other organization method that will make no sense to MCAS Yuma cultural resources personnel or future researchers.

Folder 2: Field Notes

Scanned copies of all field notes saved as PDFs in a single electronic folder. Again, as much as possible, field notes should also be organized into folders by project area and site number/IO number.

Folder 3: Site Cards

Arizona: Complete ASM site cards in both Microsoft Word and PDF formats. The files should be named for the ASM site number.

California: Complete OHP site cards in both Microsoft Word and PDF formats. The files should be named for the Primary Number.

Folder 4: Report

Complete report in both Microsoft Word and PDF formats.

A separate CD or DVD will contain GIS data:

All GIS data are to be in the template provided by MCAS Yuma and according to the GIS Specifications in the SOW. The data disk will be labeled with the date of the data set.

References

McAuliffe, Joseph R., and Eric V. McDonald
2006 Holocene Environmental Change and Vegetation Contraction in the Sonoran Desert.
Quaternary Research 65:204-215.

McDonald, Eric, Erik Hamerlynck, Joseph McAuliffe, Todd Caldwell
2004 Analysis of Desert Shrubs Along First-order Channels on Desert Piedmonts:
Possible Indicators of Ecosystem Condition and Historic Variation. Strategic
Environmental Research and Development Program SEED Project #CS1153. Final Technical
Report