

SCOPE OF WORK

**PASSIVE ACOUSTIC MONITORING OF MARINE MAMMALS
IN THE
SOUTHERN CALIFORNIA RANGE COMPLEX
(Period of Performance: 18 months from award)**

July 2017

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A. INTRODUCTION

The Navy's Southern California (SOCAL) Range Complex is located in the Southern California Bight and adjacent deep waters to the west. This region has a highly productive marine ecosystem owing to the southward flowing California Current, and associated coastal current system. A diverse array of marine mammals is found here, including baleen whales, beaked whales and other toothed whales and pinnipeds.

In January 2009, an acoustic monitoring effort was initiated near the SOCAL Range Complex with support from the Pacific Fleet. The goal of this effort was to characterize the vocalizations of marine mammal species present in the area, to determine their seasonal presence patterns, and to evaluate the potential for impact from naval operations.

Current monitoring efforts are conducted to support marine mammal studies in the offshore waters of the Southern California Range Complex portion of the Hawaii-Southern California Training and Testing (HSTT) Study Area, in compliance with of a Letter of Authorization (LOA) from the Department of Commerce's National Marine Fisheries Service of 13 December 2013.

The principal components of this cooperative agreement are: (1) collect and analyze passive acoustic monitoring data; (2) perform shipboard visual and acoustic surveys for marine mammals on California Cooperative Fisheries (CalCOFI) cruises in the southern California Bight region; (3) evaluate the potential impact of sonar on marine mammals; (4) determine spatial population structure of fin whales in southern California; and (5) produce a report of each effort. The optional components of this cooperative agreement are: (1) Summary report of 5 years of anthropogenic noise in SOCAL; (2) Summary report of 5 years of blue, fin and beaked whale presence in SOCAL; (3) Analysis of baleen whale calls (sonobuoys) from CalCOFI; and (4) Analysis of regional differences in blue whale songs along US west coast.

B. PURPOSE

This cooperative agreement includes BASE five tasks and up to four (4) optional tasks: The first base task is to deploy three High-frequency Acoustic Recording Packages (HARPs) or similar acoustic recording technology for one year to collect passive acoustic data or similar acoustic recording technology in the SOCAL Range Complex. This task also includes the analysis of HARP data to identify species of marine mammals present in the study area, the occurrence of Mid-Frequency Active (MFA) sonar, and movements of calling marine mammals. The second task is to participate in quarterly CalCOFI cruises to collect visual and acoustic data of marine mammals through summer 2018. The third task includes a detailed analysis on the presence of sonar and other anthropogenic sounds and their impact on marine mammals. The fourth task is to evaluate fin whale songs and determine if there are spatial patterns in population structures. Finally, the last base task is to develop a separate annual report for each task (1-4).

All efforts in this agreement support the requirement in the LOA issued for the HSTT Study Area.

The objectives of this Agreement are to:

- Support the Navy's passive acoustic monitoring requirements outlined in the HSTT LOA
- Provide information on marine mammal occurrence in the SOCAL Range Complex to aid monitoring and reporting requirements

C. LOCATION

This project is located within the SOCAL Range Complex, which is situated between Dana Point and San Diego, CA and extends more than 600 nautical miles (nm) southwest into the Pacific Ocean, encompassing 120,000 nm² of sea space, 113,000 nm² of special use airspace, and over 56 square miles (mi.²) (145 square kilometers) of land area.

D. DESIGNATED REPRESENTATIVES

1. The Cooperative Agreement Administrator (CAA) is Mr. Reagan Pablo, Contract Specialist, Naval Facilities Engineering Command, Southwest, 1220 Pacific Highway, San Diego, CA 92132-5190, telephone (619) 532-4150, and email reagan.s.pablo@navy.mil.

2. The Cooperative Agreement Technical Representative (CATR) is Christiana Boerger (Code EV22.CB), Marine Biologist for Naval Facilities Engineering Command Environmental Core, Southwest Division, 1220 Pacific Highway, San Diego, CA 92132. Phone (619) 532-4182; email christiana.boerger@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 affect any change to this Cooperative Agreement.

3. The U.S. Commander, Pacific Fleet Representative is Chip Johnson, Natural and Marine Resource Program Manager (Code N465CJ), Naval Base Coronado, Environmental Readiness Division, NASNI, PO Box 357033 San Diego, CA 92135. Phone: (619) 767-1567 and email: chip.johnson@navy.mil.

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

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

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

E. PERIOD OF PERFORMANCE

The period of performance covered by this agreement is **18 months upon award to March 2019**. The monitoring field work activities for this project are scheduled to occur between summer/fall 2017 and summer/fall 2018. This timeframe allows for the deployment and recovery of HARPs as well as quarterly CalCOFI cruises. The end date is the anticipated date that the Final Report is accepted by the Government. The agreement also has four (4) option items. The parties may extend the term of this Cooperative Agreement by written modification. Each option item has a period of performance of 18 months from award. The award of any or all options may be awarded at anytime during the base period of performance and may not be awarded no later than 18 months from the date of award of the base period of performance. The total duration of this agreement, including any option years, shall not exceed 36 months.

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

F. MATERIAL AVAILABLE FOR REVIEW

Recipient and/or his/her representative(s) will have access to the following materials through the CATR or Pacific Fleet Representative. The Recipient shall pay for or replace any items borrowed that are damaged, stolen or lost.

- a. 2016 U.S. Navy Annual Marine Species Monitoring Report for the Pacific
- b. HSTT LOA

G. GENERAL REQUIREMENTS

1. The Recipient shall provide all labor, management, supervision, tools, materials, equipment, transportation, meals, and lodging for him/herself and his/her personnel. All Cooperator equipment is subject to inspection and approval by the Pacific Fleet Representative.
2. The Recipient shall provide all equipment (unless otherwise stated) and analyses necessary to complete the work described within this Agreement. All data (raw and associated files), photographs, and equipment > \$5000 per unit in value and supplies > \$5,000 in aggregate value purchased with Agreement funds (including computer software) shall become the property of the Department of the Navy (DoN) at the end of the Agreement. Equipment is defined as "tangible nonexpendable personal property including exempt property charged directly to the award having a useful life of more than one year." Supplies are defined as "All personal property excluding equipment, intangible property, and debt instruments, and inventions of a contractor conceived or first actually reduced to practice in the performance of work under a funding agreement ("subject inventions"), as defined in 37 CFR part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements." (**DoD Grant and Agreement Regulations, DoD 3210.6-R#**)
3. The Recipient shall visit the study/project area as often as necessary and within the time limits stated below to accomplish the purposes of the Agreement as detailed further in this Scope of Work. It is the Recipient's responsibility to obtain security and entrance clearances and camera passes for himself/herself and his/her personnel onto the Installation. The Recipient must comply with all security rules, regulations, requirements, and day-to-day operational changes thereto. Unannounced changes to day-to-day operational procedures may, at times, prohibit the Recipient access to study/project sites. While on the installation, the Recipient shall abide by all applicable rules and regulations issued by the

Commanding Officer. The Recipient may be subject to inspections for contraband while on Government property.

4. The Recipient shall manage the total work effort and assure fully adequate and timely completion of services required under this Agreement. Included in this function shall be a full range of management duties including, but not limited to, planning, scheduling, inventory, analysis, quality control, and for meeting professional industry standards for conducting habitat management and surveys, plant nursery management and invasive pest plant species control.

5. Due to the complexity of work, the Recipient shall provide the following key personnel with the following minimum qualifications:

A. Principal Investigator: The Recipient shall designate one person as responsible for ensuring that provisions are in place project and personnel supervision, quality control and meeting of reporting requirements on a daily basis. This person shall have, at the minimum:

i. A PhD in Physics or related science.

ii. Experience and knowledge of underwater acoustics in relation to marine mammal impacts, and populations, as demonstrated by at least 10 years of previous work or research experience.

iii. Specific knowledge of underwater sounds produced by marine mammals along the U.S. West Coast, as demonstrated by at least 10 years of previous work or research experience.

B. Research Associates: The person(s) shall have, or have immediate access to personnel that have, at the minimum:

i. A PhD in Physics, Oceanography, Physiology, or related science.

ii. At least 3 years of experience with passive acoustic monitoring of marine mammals in the U.S. West Coast. Must have the ability to identify U.S. West Coast marine mammals with acoustics, determine densities of marine mammals with acoustics, evaluate impacts of noise to marine mammals.

6. The Recipient shall provide the CAA (via the CATR) the names of persons and copies of their resumes being considered for work under this Agreement. The Recipient shall not replace or substitute any staff member without prior written approval by the CAA.

7. The Recipient shall work closely with the CATR and Pacific Fleet Representative in planning and carrying out all field activities.

8. All work conducted in support of this Agreement shall comply with all applicable federal and state laws.

9. If there is an incident which the Recipient believes may involve “take” of an endangered species and involves an activity permitted under the endangered species permit, the Recipient shall follow the procedures in the permit and notify the Pacific Fleet Representative and CATR immediately.

10. If there is an incident which the Recipient believes may involve “take” of an endangered species that results from an activity not listed on the permit, the Pacific Fleet Representative and CATR shall be contacted immediately.

11. At no additional cost to the Government, the Recipient shall be in possession of all necessary permits necessary to conduct the activities stipulated in this Agreement. All permits will be submitted as part of the proposal.

12. All parties involved in this Agreement agree to comply with all applicable laws and regulations pertaining to the provision of safe and respectful workplace and to provide a work environment free of harassment and intimidation for such party's own employees and third parties.

13. All work conducted in support of this Agreement shall comply with all federal laws including, but not limited to, the Marine Mammal Protection Act, Endangered Species Act, the Clean Water Act and the Migratory Bird Treaty Act.

14. All field notes, field data forms, electronic storage of field data, photographs, etc. collected and produced as part of this Agreement are the property of the DoN. Legible copies of the field notes, data forms and other information shall be provided to the CATR and Pacific Fleet Representative upon request.

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

16. The Recipient shall inform the CATR and Pacific Fleet Representative via e-mail of any unusual activity observed while conducting surveys in the field (e.g. trespassers or persons in unauthorized areas). Information should include (a) location, (b) date, (c) time, and (d) any detailed facts regarding the activity.

17. The Recipient shall inform the CATR and Pacific Fleet Representative via e-mail of any unusual animal species observed while conducting surveys in the field (e.g. species which are federally listed or are State of Species of Special Concern). Information should include (a) location, (b) date, (c) time and (d) any detailed facts about the sighting.

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

19. The DoN, via the CAA, may request updated data presented on maps, figures and/or tables whenever the DoN's need to obtain this information is before the next report required under Section I of this Agreement. The Recipient shall forward the requested data electronically within ten (10) days from the date of request. If the requested data cannot be provided within this time frame, the Recipient shall forward electronically the most updated raw data to the CAA, via the CATR (cc provided to Pacific Fleet Representative). The DoN understands that facilitating the requested most updated data may reduce the amount of work that would normally be accomplished during the period of time required to complete the request. The Recipient shall document the amount of efforts and its translated cost estimate that would have been incurred by the Recipient to complete the request for updated data. This document shall be electronically forwarded to the CAA (via CATR and cc provided to Installation Representative) to review

so that the DoN will have a firm understanding on the amount of work displaced that would have normally been accomplished during the period of time required to complete the request.

H. SPECIFIC REQUIREMENTS

The following specific work requirements for this Cooperative Agreement shall be consistent with the requirements of the HSTT LOA and all pertinent federal, state and local laws and regulations. All work shall be coordinated with the CATR and Pacific Fleet Representative.

1. **Collect and Analyze Passive Acoustic Monitoring Data (August 2017- ~August 2018):**

The Cooperator shall deploy HARPs sampling at 200 kHz at three sites in and near SOCAL Range Complex (H, N, and P; see Figure 1) or similar acoustic recording technology at the same frequency with a battery time of at least one year, or with frequency of service calls for data retrieval and battery replace so that a year of onsite recording is obtained. One site will include the deployment of two 4-channel HARPs to allow 3-D tracking of vocalizing whales or similar acoustic recording technology at the same frequency with a battery time of at least one year, or with frequency of service calls for data retrieval and battery replace so that a year of onsite recording is obtained.

Analysis of these data shall include soundscape characterization, presence of species of interest (blue, fin and beaked whales), presence of Mid-Frequency Active (MFA) sonar, explosions, and vessel noise, as well as calculations of movement tracks for selected calling animals.

Monitoring Question: What is the seasonal occurrence and density of cetaceans within the Navy's Southern California Range Complex

2. **Participate in CalCOFI Cruises (September 2017-summer 2018):**

CalCOFI cruises provide detailed, long-term surveys for marine mammals in the Southern California Bight. The Cooperator shall provide personnel and maintain visual and acoustic surveys for marine mammals during four upcoming CalCOFI cruises (fall 2017, winter 2017, spring 2018 and summer 2018). The Cooperator shall collaborate with the Southwest Fisheries Science Center on the development of habitat models for Southern California.

Monitoring Question: What is the seasonal occurrence and density of cetaceans within the Navy's Southern California Range Complex

3. **Evaluate Impact of Sonar And Other Anthropogenic Sounds on Marine Mammals:**

The potential for anthropogenic sound to disrupt the normal activities of marine mammals is an issue of concern to the Navy, particularly with regard to MFA sonar.

The Cooperator shall conduct a detailed analysis on the presence of anthropogenic sources of sound for the study of sonar impact on blue whales and beaked whales. This FY17 effort is a continuation of work funded in FY15 and FY16. The Cooperator shall also develop methods to compare and statistically analyze these data to presence of these species' calls to investigate the potential impacts of sonar and other anthropogenic activities on calling animals.

Monitoring Question: What, if any, are the short-term behavioral and/or vocal responses when exposed to sonar or explosions at different levels or conditions?

Monitoring Question: Does exposure to sonar or explosives impact the long term fitness and survival of individuals or the population, species or stock? (with focus on blue whale, fin whale, humpback whale, Cuvier's beaked whale, and other regional beaked whale species)

4. Determine spatial population structure of fin whales in southern California:

Based on the analysis of fin whale song patterns at one location, songs from resident and “transient” or pan-Pacific populations of fin whales have been described.

By extending this analysis to additional sites in southern California, the Cooperator will get a more complete picture of spatial variability in resident and pan-Pacific populations of fin whales.

Monitoring Question: What, if any, are the spatial patterns in fin whale population structures within the Navy's Southern California Range Complex?

5. Reporting (2018):

Tasks 1-4 shall be summarized in individual reports as detailed below in Section J. Submittals and Schedules.

Each option item has a period of performance of 18 months from award. The award of any or all options may be awarded at anytime during the base period of performance and may not be awarded no later than 18 months from the date of award of the base period of performance. The total duration of this agreement, including any option years, shall not exceed 36 months. The following are Options for this cooperative agreement:

Option 1: Summary report of 5 years of anthropogenic noise in SOCAL:

Based on monitoring effort in SOCAL over the past 5 years (2013-2017), the Cooperator will provide summary report on the anthropogenic noise sources (including MFA, sonar, explosions, as well as overall ambient noise) at three SOCAL sites.

Option 2: Summary report of 2 years of 5 years of blue, fin, and beaked whale presence in SOCAL:

Based on monitoring effort in SOCAL over the past 5 years (2013-2017), the Cooperator will provide a summary report on whale call occurrence (including fin whales, blue whales, and beaked whales) at the three SOCAL sites where the HARPs are deployed.

Option 3: Analysis of baleen whale calls (sonobuoys) from CalCOFI:

Passive acoustic monitoring in southern California has largely focused on fixed sensors at three locations in the vicinity of the SOCAL range. However, passive acoustic data are also available quarterly from a broader Southern California Bight region, obtained during CalCOFI surveys. To obtain more detailed information on the spatial distribution of these species over that time period, the Cooperator will determine the presence of blue whale, fin whale, and humpback whale calls from quarterly CalCOFI cruises conducted over the course of 8 years will be analyzed.

Option 4: Analysis of regional differences in blue whale songs along US west coast:

Blue whale populations worldwide produce region-specific songs. Recent preliminary analysis of blue whales songs from the Northeast Pacific (including SOCAL, NWTRC, and GOMAA ranges) indicated finer-scale variability in blue whale songs across this area. Overall, the songs are all consistent with the Northeast Pacific blue whale song type, but fine-scale temporal and frequency variability in the song units raises the question whether these songs may indicate a finer scale

population structure. The Cooperator will further explore this question by quantifying the levels of song variability and comparing those differences within and across regions.

6. In accordance with the California Cooperative Ecosystem Studies Unit Cooperative (CESU) and Joint Venture 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 ensure coordination of all activities with the CATR and Pacific Fleet Representative via email.
2. The Recipient shall be available on an intermittent basis throughout the Agreement period for consultation with the CATR and Pacific Fleet Representative on matters involving data collection, analysis, reporting, or other matters related to this Cooperative Agreement.

J. SUBMITTALS and SCHEDULES

1. Electronic copies of all submittals/schedules/deliverables (examples include, but are not limited to, draft/interim/final reports, progress reports/monthly reports) will be provided to the Cooperative Agreement Administrator for retention in the official agreement file.
2. Submittals And Deliverable Schedule

Event/Deliverable	Due Date	Delivery Type/Format
Meetings and Coordination		
Pre- and post- field season coordination meetings	Within 14 calendar days following award; and as needed	Via conference call or in person meeting
Task 1. Collect and Analyze Passive Acoustic Monitoring Data (August 2017- ~August 2018)		
Passive acoustic device construction and calibration (HARPs)	Begin upon award	N/A
(Continued) Field deployment of HARPs (and service as needed)	August 2017-August 2018	Email with deployment dates and lat/long positions of each device
Device retrieval	< August 2018 (or periodically between August 2017-August 2018, as needed)	N/A
Analysis	<December 2017 *	N/A
Task 2. Participate in CalCOFI Cruises (September 2017-summer 2018):		
Analysis	< November 2018 *	N/A
Task 3. Evaluate Impact of Sonar And Other Anthropogenic Sounds on Marine Mammals:		
Analysis	August 2017 – summer 2018	N/A
Task 4. Determine spatial population structure of fin whales in southern California		
Analysis	< June 2018 *	Analysis
Task 5. Reporting (2018)		

Task 1, 3, 4 Draft Report **	<15 January 2018	Electronic (email) (.doc)
Task 2 Preliminary Assessment #	<15 February 2018	Electronic (email) (.doc)
Task 1, 3, 4 Final Report **	<15 March 2018	Electronic (email) (.doc)
Task 2 Draft Report **	<1 September 2018	Electronic (email) (.doc)
Task 2 Final Report **	<30 November 2018	Electronic (email) (.doc)
* Or as data is accumulated so that a complete annual period is covered from previous similar reporting.		
** Reports shall be in scientific format and include the following (for All Tasks unless indicated: 1) Title page showing title, date, cooperative agreement number, CATR Representative contact information; 2) Sub-title page showing title, prepared by and for listings, date and recommended citation; 3) SF-298 form page; 4) Table of contents; 5) Abstract; 6) Detailed methodology describing techniques, methods, plot of deployment locations, and equipment used; 7) Summary of passive acoustic detections or analysis; 8) Species specific time-series plots of acoustic detections for species of interest. A time-series composite will be presented to show detections over the entire deployment cycle to identify potential seasonality (mainly Task 1,3, and 4, as needed); 9) Quantitative and qualitative description of vocalizations by species, including representative spectrograms (Task 1, as needed in Task 3,4); 10) Changes in vocalizations over time; 11) Classification and characterization of anthropogenic noises detected to include both sonar, explosive events, and shipping noise; 12) Sound budget of the recording sites (Task 1 only); 13) Plots of visual sightings by species (Task 2); 14) any other table or figure deemed needed for a given report; and 15) References, if cited.		
# Intent of this assessment is not the draft and final Task 2 reporting listed subsequently, but a 1-2 page MS Word file listing CalCOFI survey completed for 1 January 2017 through 30 December 2017, brief listing of any results (ex., total number of sightings by cruise, species sighted, etc.). Navy requires this info for inclusion in an annual monitoring report due prior to Task 2 Final Reporting.		

- a. The government will have a 30 calendar day review period from receipt of the draft reports to comment. The final reports shall be submitted within 30 calendar days of receipt of Government comments. If necessary the government will have a within 15 calendar day review period from receipt of final reports (with comments incorporated) for government review of documents to ensure comments were adequately addressed. If review and acceptance by government is not completed within the 30 day review period, constructive acceptance will be deemed to have occurred and final deliverables can be submitted. Only the CAA has the authority to make changes to the 30 day review period.
- b. The Recipient shall provide all required draft reports as electronic files, either as email attachments, sent to the CATR on CD, or downloadable via FTP site. The Recipient shall provide six (6) bound copies of the final deliverables, each with an associated CD containing the report, maps, photographs and any pertinent supplemental information.
- c. Submittal/Deliverable Standards: All submittals/deliverables are expected to be of the highest professional quality and will be rejected if any of the following exists:
 - there are typographical errors, spelling, or grammar mistakes; or
 - results and discussion are not tied directly and continually to natural resource management concerns of the installation; or
 - the document is not organized in a manner that flows well; or
 - the document does not provide appropriate context, background, literature review, and comparison to other relevant studies, locations, and similar species.
 - The appropriate style guide is not adhered to (in most cases this is the JWM or CSE).
- d. The draft report shall be a complete document that has been proofread for spelling and grammatical errors and contains all text, figures, graphics, photographs and tables provided for review.
- e. Data. All raw data, data sheets and electronic databases (including GIS data) shall be available at the

request of the CATR or Pacific Fleet Representative submitted as appendices or supplemental information with the draft Annual Report. If too large to be included with the other draft submittals, the Electronic databases shall be submitted on a labeled CD-ROM. The final versions of these databases will be included on the CD-ROM's attached to the final reports.

f. Maps

- 1). All maps created for this Agreement shall be incorporated in the draft and final reports. All maps shall be printed on 8.5 by 11-inch paper or 11 by 17-inch paper folded to match the size of the report(s).
- 2). All maps shall be printed at an acceptable scale using a State Plane projection, Zone 0405, North American Datum 1983 or USGS. Electronic copies of all maps shall also be provided.
- 3). All maps created for this Agreement shall contain the following information: (a) title, (b) scale bar, (c) legend, (d) date, (e) north arrow and (f) notation identifying who prepared the map.

g. Photographs

The Recipient will document and record pertinent aspects of the work using color digital imagery. The Recipient will provide camera and all necessary equipment. Photographs of activities documented shall be included as an appendix on CD ROM. All photographs shall become DoN property and shall be submitted with the final report. All original photographs shall be appropriately labeled with information to include:

- date
- location (specific place and Installation)
- subject/activity
- activity documented,
- identification of any people in the picture
- photographer.

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 Agreement and authorize others to receive, reproduce, publish, or otherwise use such data for Federal purposes. The DoN acknowledges and agrees that the Recipient's fundamental consideration in performing the research under this Agreement shall be Recipient's right to publish the results of such research for academic and scientific purposes. The Recipient shall submit, for review and comment, any proposed professional, scientific or non-scientific report, paper or note published or unpublished or be part of any technical or non-technical presentation or be provided to anyone not a party to this Agreement to the DoN thirty (30) 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 research was funded by the U.S., Commander Pacific Fleet.”

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

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

L. RELEASE OF INFORMATION

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 IR, CATR and CAA.

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 05 July 2011 or latest edition. A Site Safety and Health Plan (SSHP) is also required if the work is potentially hazardous. Potentially hazardous activities include, but are not limited to:

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

The minimum requirement for the SSHP is in Section 28 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 US Army Corps of Engineers Safety & Health Requirements Manual, 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 Cooperative Agreement, while ensuring a safe work environment for all personnel involved. The draft APP, SSHP and AHA have to be reviewed by the GDA (SW EV Safety Office, PM, 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 potentially hazardous activities. Government PM 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 DoN. The Recipient shall certify to CATR that the final APP, SSHP and AHA has 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 attach to the monthly billing request. The CATR will submit a copy of the MER to the SW EV Safety Office.

N. HOLD HARMLESS

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

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

O. INSURANCE

1. At the commencement of this Cooperative Agreement, the Recipient shall obtain, from a reputable insurance company or companies satisfactory to the Government, comprehensive general liability insurance. The insurance shall provide an amount not less than a minimum combined single limit of \$1,000,000.00 for any number of persons or claims arising from any one incident with respect to bodily injuries or death resulting 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 Government with a certified copy of the policy or

policies, or certificates of insurance evidencing the purchase of such insurance. Each policy of insurance required under this Paragraph shall contain an endorsement reading as follows:

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

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

3. The Recipient at its sole cost and expense, may insure its activities in connection with this Cooperative Agreement by maintaining a program of self-insurance that complies with the requirements of this Section O, including coverages specified in Attachment B 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 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 Government and, to the extent of its liability as provided in this Section O, shall, upon demand, either compensate the Government for such loss or damage, or rebuild, replace or repair the item or items of the premises or facilities so lost or damaged, as the Government may elect. If the cost of such repair, rebuilding, or replacement exceeds the liability of the Recipient for such loss or damage under this Section O, the Recipient shall effect such repair, rebuilding, or replacement if required so to do by the Government, and such excess of cost shall be reimbursed to the Recipient by the Government. In the event the Recipient shall have effected any repair, rebuilding, or replacement which the Recipient is required to effect pursuant to this Section O, the Government shall direct payment to the Recipient of so much of the proceeds of any insurance carried by the Recipient and made available to the Government on account of loss of or damage to any item or part of the premises or facilities as may be necessary to enable the Recipient to effect such repair, rebuilding or replacement. In event the Recipient shall not have been required to effect such repair, rebuilding, or replacement, and the insurance proceeds allocable to the loss or damage which has created the need for such repair, rebuilding or replacement have been paid to the Recipient, the Recipient shall promptly refund to the Government the amount of such proceeds.

P. PAYMENTS

1. Partial payments equal to the amount of work accomplished may be made monthly during the field work portion; after submittal of the draft reports; and after receipt of the final reports.
2. The final payment of 15 percent of the Cooperative Agreement overall value shall be paid when the final report and all other submittals listed in Section J have been received and accepted by the CATR.
3. Any requirement for the payment or obligation of funds, under the terms of this Agreement, shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 USC §1341 et seq. Nothing in this Agreement shall be construed as implying that Congress will, at a later time, appropriate funds sufficient to meet deficiencies.
4. Payments will be made in accordance with Defense Federal Acquisition Regulation (DFAR) 252.232-7006 Wide Area Work Flow Payment Instruction. See Attachment C 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/execomp.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

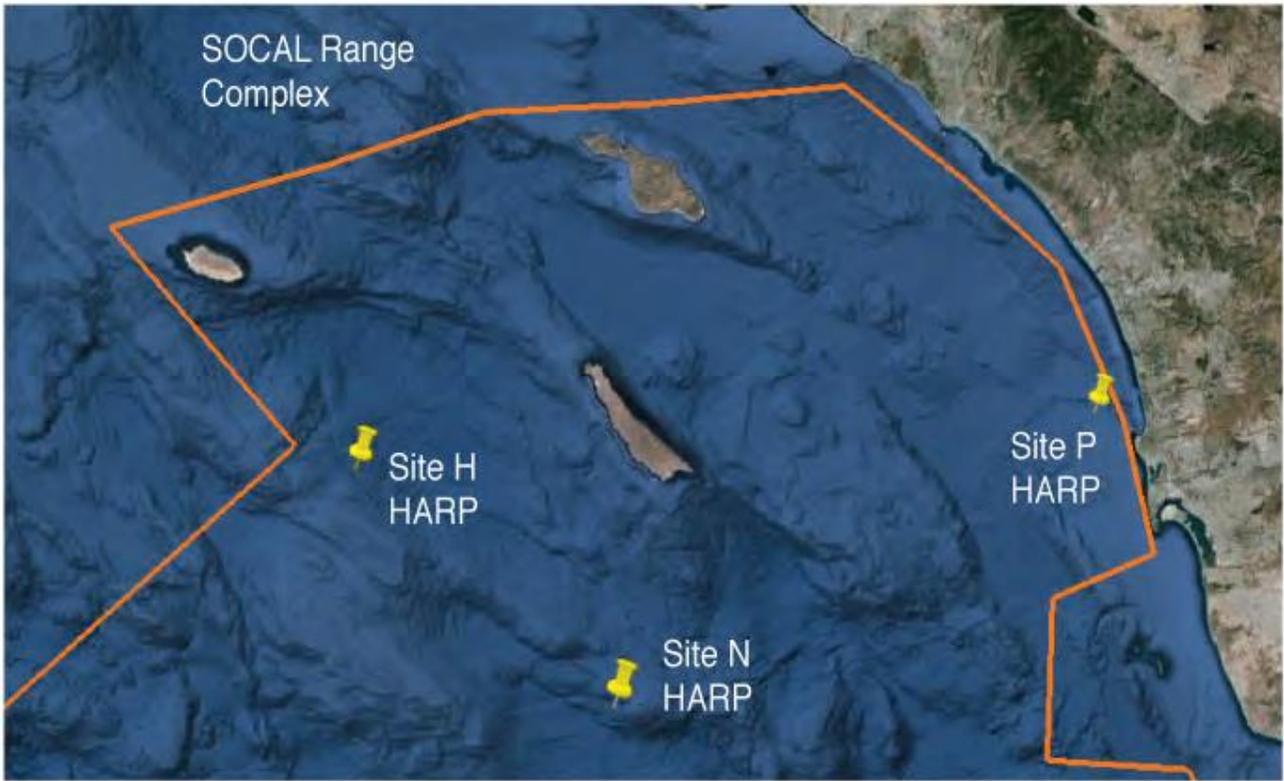


Figure 1. Location of HARPs in the SOCAL Range Complex.

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 Defense Fuel Support Point, San Pedro under this Cooperative Agreement, No. N62473-17-2-0014.""

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

ATTACHMENT A (Continued)
NON SELF-INSURED 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. 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 Defense Fuel Support Point, San Pedro under this Cooperative Agreement, No. N62473-17-2-0014."

e. Loss, if any, under this policy shall be adjusted with Recipient and the proceeds, at the direction of the 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: **N62473-17-2-0014**

(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.

