

**PR Number:** 20023460

**Award Number:** P14AC00999

**Project Number: UNM-103**

**CFDA Number:**  15-945

**Park/NPS Unit:** Chiricahua National Monument, Coronado National Memorial, Fort Bowie National Historic Site

**Title of Project:** *FY14-17 Continued Documentation of Archaeological Sites Impacted by Illegal Border Activities and Wildfire within the NPS Units of Coronado National Memorial (CORO), Chiricahua National Monument (CHIR) and Fort Bowie National Historic Site (FOBO)*

**Administered through the:**  Colorado Plateau Cooperative Ecosystems Studies Unit Cooperative Agreement Number P14AC00921

**CESU Partner:** University of New Mexico

**PROJECT CONTACTS:**

**Principal Investigator:** Dr. Bruce Huckell, Senior Research Coordinator, Maxwell Museum of Anthropology MSC01-1050, University of New Mexico, Albuquerque, NM 87131 Tel. (505) 277-4491 [bhuckell@unm.edu](mailto:bhuckell@unm.edu)

**Administrative Contact:** Diana Sargent, Sponsored Projects Officer, 1700 Lomas NE, Ste 2200 / MSC01 1247, 1 University of New Mexico, Albuquerque, NM 87131-0001, Phone 505-277-2258, Fax 505-277-4185, Email: [dsargent@unm.edu](mailto:dsargent@unm.edu)

**NPS Certified ATR:** Matthew Guebard, Chief of Resource Management, Montezuma Castle NM & Tuzigoot NM, (928) 649-6195 Email: matt\_guebard@nps.gov@nps.gov

**FUNDING INFORMATION:**

**Amount Funded:** $142,664.00

**NPS Account Numbers (amounts in parentheses):**

Cultural Resource Border Impacts Fund CORO ($16,888) PPMPRLE1B.000000,PPIMCORO00,XP0190565A

Cultural Resource Fund Source CHIR Grasslands Survey ($32,000) PPMRSCR1C.000000, PPIMCHIR00, XP0190056B

Cultural Resource Fund Source CORO Uplands Survey($71,112) PPMRSCR1C.000000, PPIMCORO00, XP0190169A

Cultural Resource Fund Source FOBO Arch Survey ($ 22,664) PPMRSCR1C.000000, PPIMCHIR00, XP0190198B

**Fund Source (e.g., ONPS, FLREA, CRPP, CESU, etc.): see above**

NPS Funding

Is this funded using a reimbursable account number? If yes, IMR contracting needs a copy of the Interagency Agreement.

**PROJECT DATES:**

**Start Date:** *September 15, 2014*

**End Date:** *October 1, 2017*

**NPS Administrative Contacts**

**Interim CESU Coordinator (May 18 – September 13, 2014):** Todd Chaudhry, National Park Service/CPCESU, NAU P.O. Box 5765, Flagstaff, AZ 86011, 928-523-6638, Fax: 928-523-2014;

**Intermountain Region Administrative Contact:** Kelly Adams, Grants and Agreements Specialist, National Park Service, 12795 West Alameda Pkwy, Lakewood, CO 80228 Phone: 303-969-2303 Fax: 303-969-2992 Email: Kelly\_adams@nps.gov

**FEDERAL FINANCIAL REPORTS AND DRAWDOWN SCHEDULE:**

***Federal Financial Reports*** (Check as required for project based on spending plan, period of performance, risk, cooperator history, etc.)

{ } Quarterly {X} Semi-annually { } Annually {X} Final

**Project SCHEDULE AND TECHNICAL REPORT DEADLINES:**

List all technical reports and products in sequential order as required in the scope (more lines and milestones can be added as needed):

*Project Start Date* – September 15, 2014

*Technical progress reports –* { } Quarterly {X} Semi-annually { } Annually

(Check as needed from PI to monitor progress of specific project. Content should be addressed in the scope.)  
  
*Investigator’s Annual Report (IAR)* – October 1, 2017

*Database, Collections/Specimens, Archives, and Maps provided to the NPS ATR or Technical Expert* – October 1, 2017

*Draft Final Report* – October 1, 2017

*Final Report* – December 1, 2017

*Project End Date* – December 1, 2017

**CPCESU REQUIRED PRODUCTS (may be different from those products required by the ATR – See Statement of Work for Products required by the NPS unit):**

The Principal Investigator will prepare a brief report abstract suitable for public distribution and two hard copies and an electronic version (in PDF file format) of the final report and mail all to, CPCESU Research Coordinator, NAU P.O. Box 5765, Flagstaff, AZ 86011. Please be sure to include the project number (e.g.; NAU-###, UNM-###) and the P number on the cover page of the final report.

**PROJECT ABSTRACT:**

This project is a continuation of an existing agreement and combines three primary tasks including: 1) continuing the inventory of archeological sites through a pedestrian survey of the uplands in Coronado National Memorial and Chiricahua National Monument; 2) documenting and recording archeological sites at CHIR and CORO using surficial, high precision mapping and 3) complete documentation of archeological sites in the Siphon Canyon headwaters area at Fort Bowie National Historic Site. Due to the specific skill-set required in mapping and recording Archaic sites, a specialist in this time period will be required. The cooperator has assisted the park in developing and implementing protocols for mapping many of these sites and is familiar with the all three units.

Specifically, UNM staff will focus onreconnaissance and relocation of archaeological sites including identifying or verifying boundaries of sites. Using a variety of mapping methodologies, each site will be mapped to include identification of in-situ architecture and artifacts as well as wall fall (mapping individual rocks) when appropriate. Any associated features will be documented and mapped. High precision site mapping including all features and architectural remains, topography, site boundaries, drainages, significant flora, and bedrock may also be required. Finally, mapping of UDA/DT features (trails/camps), trash piles, disturbance or vandalism will be conducted.

**Scope of Work:**

Southern Arizona Office archeologists (SOAR) will conduct the survey in conjunction with Dr. Bruce Huckell and the University of New Mexico (UNM) and Southeast Arizona Group staff. This work will consist of pedestrian survey to record sites, historic trails and roads, or other exposed features according to three *Tasks* outlined below. Information collected from the project will include site location, features/attributes, artifacts, condition, threats and disturbances, fuel load, and environmental zone. Archeologists will use the data to generate ASMIS site records, condition assessment priorities, and fire management planning. Further, staff will archive and catalog the artifacts, photographs, original field notes, and original field forms from the survey at WACC. Methods as described below will be used to complete each task.

*Task 1. Baseline Archeological Survey of CORO’s Uplands after the Monument Fire.*

After a GIS analysis for slopes greater than 20%, archeologists determined that 2,660 acres (56% of the park) comprise the Coronado National Memorial’s (CORO) uplands areas. Archeologists will survey selected portions of the uplands -upper Montezuma Canyon and Windmill Canyon- while ground surface visibility remains at its highest after the fire. This creates a critical window for work and preservation that may not occur in the future due to the long-term fire regimes in the area. UNM will collaborate with SOAR Archeologist and SEAZ RM staff to schedule survey locations and times. Survey will be done according to methods outlined above as well as final reporting. Field work will require consultation with Coronado Visitor and Resource Protection regarding need for escorts and/or current border activity levels.

*Task 2. Continue CHIR uplands archeological reconnaissance survey*

An intensive archeological inventory is required to determine fire and erosion impacts caused by the 2011 Horseshoe 2 Fire. After conducting a GIS analysis of the highest potential locations for archeological sites based on slope, archeologists identified 1,153 high priority acres requiring 100% survey and an additional 3,654 acres of secondary importance requiring reconnaissance survey. This project focusses on the 3,654 acres of secondary importance (28% of the park) of CHIR’s 12,984 acres and any necessary revisits of high priority areas. The uplands survey area is divided into 11 survey blocks. Each of these blocks contains potential for the discovery of unrecorded archeological sites. UNM and NPS archeologists will continue surveying blocks that have known illegal border traffic. Again, UNM will collaborate with SOAR Archeologist and SEAZ RM staff to schedule survey locations and times. Survey will be done according to methods outlined above as well as final reporting. Field work will require consultation with Chiricahua Visitor and Resource Protection regarding need for escorts and/or current border activity levels.

*Task 3: Complete Upgrade of Archeological Documentation at FOBO due to Looting, Erosion and Illegal Border Activities*

Initial assessments tied to border impacts projects provide evidence of ongoing archeological site deterioration. Impacts include unchecked gully erosion as well as a documented human disturbance (ARPA and illegal border activity). In FY11, FOBO law enforcement completed a looting analysis project that showed active human disturbance since 1990. Park law enforcement and archeologists lack the documentation detail necessary to show the full extent of damage due to insufficient detail on maps and photographs. Although an archeological inventory was conducted in 2002, architectural and photographic documentation is insufficient for documenting long-term changes in site condition due to a lack of detail. Accurate monitoring and condition assessments are extremely difficult without a higher level of documentation.

Between FY14-16 Fort Bowie National Historic Site will upgrade documentation of 70 archeological sites to support this project. This task focuses on the completion of upgraded site documentation for remaining sites using a variety of mapping methodologies, with remaining funds/time focused on reconnaissance survey of backcountry areas. Each identified site will be mapped to include in-situ architecture and wall fall (mapping individual rocks) and any associated features utilizing methods outlined in methods above. SEAZ RM and SOAR Archeologist will collaborate with UNM regarding specific survey areas and scheduling, as well as, coordinate with Chiricahua/Fort Bowie Visitor and Resource Protection staff regarding current border activity levels.

UNM Specific Archeological Recording Tasks

1. Locate sites during survey and Identify or verify boundaries of sites.

2. Identify and collect potentially diagnostic artifacts from sites; define areas of artifact concentration and estimate surface artifact density; photograph site areas; identify any features important for understanding site activities.

3. Identify and photograph prehistoric ceramic artifacts to ware (preferably to type) and other artifact classes (flaked and ground stone, shell, bone, etc.). Identify and photograph potentially culturally/temporally diagnostic historic artifacts (cartridge casings, knives, beads, glass, repurposed metal objects)

4. Identify significant isolated occurrences, including prehistoric and historic artifacts or non-site concentrations; determine their locations; photograph any potentially diagnostic artifacts that may indicate function or age.

NPS Archeological Mapping Tasks

1. Using a variety of mapping methodologies, each site will be mapped to include identification of in-situ architecture, wall fall, topography (as derived from remote sensing), site boundaries, drainages, significant flora, and bedrock. Any associated features will be mapped.

2. Using established primary survey controls, establish site datums within CHIR, CORO, and FOBO to determine UTM horizontal datum positions and NAVD 88 elevations.

3. Map of UDA/DT features (trails and camps within sites), disturbance or vandalism from aerial imaging and individual site mapping.

4. Map locations of significant prehistoric diagnostic artifacts (projectile points, ground stone milling equipment, decorated ceramics, shell, unusual artifacts) or historic diagnostic artifacts (cartridge casings, knives, beads, glass, repurposed metal objects) at each site.

5. Produce detailed digital and publication-quality hardcopy maps (11” by 17” or other appropriate size) of each site showing the results of detailed mapping efforts.

This Reconnaissance-level survey will collect sufficient data on archeological resources to describe their distribution, general characteristics and estimate their scientific values. UNM Archeologists will summarize the following information in a report:

1. Survey criteria;
2. The boundaries of the area surveyed;
3. The method of survey, including the extent of survey coverage;
4. The kinds of historic properties present in the surveyed area;
5. Specific properties that were identified, and the categories of information collected; and
6. Places examined that did not contain historic properties.

**COOPERATIVE AGREEMENTS OR TASK AGREEMENTS INVOLVING COOPERATORS WORKING ON-SITE**

**Background**

In cooperative agreements or task agreements with universities where the university utilizes interns, student employees, research associates (RAs) or cooperators on-site (hereafter called “cooperator personnel”), these cooperator personnel sometimes work on government sites in close proximity to federal employees. It is illegal (without specific statutory authority) for federal employees to directly supervise the cooperator personnel or any university employees or for the students or other university employees to supervise federal employees. When cooperator personnel are working on an NPS site, it is important that there is a clear distinction between students and federal employees.

**Office Environment and Vehicles**

* The office space of the cooperator personnel and NPS personnel should be clearly labeled (Name and NPS or University affiliation on office or cubicle space).
* Cooperator personnel should be listed separately from NPS personnel in telephone lists, other identification or organizational rosters, and publication credits.
* Cooperator personnel should not receive “all-employee” e-mail or other communications intended for NPS personnel (unless it relates directly to the work the cooperator is doing for the NPS). When the e-mail does relate to the work being done, a copy of the same e-mail message should be sent to the University or cooperator’s supervisor.
* Cooperator personnel may use NPS e-mail systems when the communication relates directly to the work the cooperator is doing for the NPS. The e-mail addresses of the cooperator personnel must include a label associated with their NPS e-mail address that identifies the cooperator’s status (i.e., “Linda Webb, Cooperator” would be the label associated with the e-mail address, [linda\_webb@contractor.nps.gov](mailto:linda_webb@contractor.nps.gov)). Doing so clearly identifies this individual each time they send an e-mail message using the NPS system, and it identifies their status as a research associate, student intern or student employee in the e-mail directory.
* Unless stipulated in the agreement, cooperator personnel should not drive government vehicles.
* Unless stipulated in the agreement, cooperator personnel should not ride as a passenger in a government vehicle. When this is planned as part of the agreement, an appropriate amount of liability insurance should be negotiated.
* Prior written approval by the Park Superintendent or Center Manager must be obtained in order for a task to allow cooperator personnel to drive or ride in government vehicles.

**Supervision and Scheduling**

* Each task must specify the university’s/cooperator’s supervisor for the cooperator personnel.
* Unless stipulated in the agreement, NPS staff should not set hours for cooperator personnel, specify where the work should be done, or conduct performance appraisals. National Park Service staff may give performance feedback to the cooperator personnel supervisor.
* Cooperator personnel should report leave, scheduling, and other related issues to the university or cooperator’s supervisor, not to NPS employees. The supervisor of the cooperator personnel should then communicate with the NPS. National Park Service employees cannot directly supervise cooperator personnel on a day-to-day basis. Work should be given to the cooperator personnel (via the cooperator’s supervisor) on a “task basis.” Cooperators should work without NPS supervision to accomplish each task, although technical consultations and cooperation is permissible.
* The Cooperator will be responsible for any disciplinary action needed to correct student employee conduct or performance problems. The NPS agreements technical representative will inform the university/cooperator’s supervisor of any conduct or performance problems.
* The Cooperator will remove student employees from their positions if they fail to improve performance or address conduct issues.
* The NPS will review and provide feedback to students or interns regarding work assignments.
* The NPS will inform the cooperator of conduct or performance problems with cooperator personnel so that the university can counsel employees and correct the performance problems.
* The NPS will recommend to the cooperator dismissal of cooperator personnel based on conduct or performance issues.
* The Cooperator will hire students, interns or RAs to work on NPS tasks identified in the agreement. Hiring will be conducted in consultation with the NPS Agreements Technical Representative (ATR).
* The Cooperator will: pay students, interns or RAs for hours they have worked in support of the agreement.

**Representation and Communication**

* Cooperator personnel cannot in any way represent themselves to the public as NPS employees.
* Cooperator personnel are required to wear visible identification at all times.

**Other Issues**

* Cooperator personnel should not list an NPS affiliation on publications, but rather should list the cooperative agreement under which the work was performed.
* Cooperator personnel should not be invited to official NPS “social” events.
* Cooperator personnel are not authorized to purchase property and supplies with government funds.
* Cooperator personnel will follow the local policy of the facility when federal facilities are closed due to early release for holidays, snow days, etc.

**PRODUCTS:**

**1)** Prepare a project completion report that includes:

1. a narrative description of the project goals and methodology
2. synthesis of existing archaeological research conducted in the area/region
3. results of archaeological survey including descriptions of each site/isolated occurrence and associated time period/ use.
4. maps, photographs, and GIS data (coordinates) for each site
5. artifact lists showing artifact type, in situ location (coordinates) and proposed age/use
6. recommendations for future archeological research and site monitoring activities

**2)** Copies of all field notes, photographs or other data collected during the project

**BUDGET: *FY 2014-2017***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **Rate** | **Unit** | **No. of Units** | **Total** |
| **Salaries** |  |  |  |  |
| Faculty- University Investigator | 34.24 | hr | 480 | $16,435.20 |
| Supervisory Archaeologist | 13 | hr | 1200 | $15,600.00 |
| Crew Members (2) | 12 | hr | 1600 | $19,200.00 |
| Research Assistant tuition | $294.99 | unit | 18 | $5,309.82 |
| Fees |  |  |  | $1,000.00 |
| Insurance |  |  |  | $1,662.00 |
| Project Lead Benefits | 33.6% of salary rate |  |  | $5,522.22 |
| Supervisory Archaeologist and Crew Benefits | 1.0% of total salary |  |  | $348.00 |
| **Travel** |  |  |  |  |
| Travel (rental car, small 4 x4) | $309.99 | week | 16 | $4,959.84 |
| Fuel |  |  |  | $3,200.00 |
| Taxes, fees |  |  |  | $2,640.92 |
| Travel (rental car, sedan) | $200.00 | week | 8 | $1,600.00 |
| Fuel |  |  |  | $1,200.00 |
| Taxes, fees |  |  |  | $851.97 |
| Travel (rental car, sedan) | $250.00 | week | 2 | $500.00 |
| Fuel |  |  |  | $720.00 |
| Taxes, fees |  |  |  | $266.24 |
| Motel | $75 | day | 300 | $22,500.00 |
| Per Diem (4 people) | $40 | day | 410 | $16,400.00 |
| **Supplies** |  |  |  |  |
| Field (GPS unit, tapes, Ziploc bags, notebooks, etc.) and laboratory/office (Xerox, printer cartridges, etc.) |  |  |  | $1,500.00 |
|  |  |  |  |  |
| **Project totals** |  |  |  |  |
| **Total Direct Costs** |  |  |  | $120,416.21 |
| **Total Indirect Costs (17.5%)** |  |  |  | $2,1247.84 |
| **GRAND TOTAL** |  |  |  | $142,664.06 |

Grand Total Budget $ 142,664.00 (rounded)

**Budget Narrative:**

This project will be devoted to completion of archaeological survey of Coronado National Memorial uplands, continuation of archaeological survey of the secondary (lower priority) areas within Chiricahua National Monument, completing archaeological survey of the primary (highest priority) areas within Chiricahua National Monument, and completion of site documentation and backcountry reconnaissance at Fort Bowie National Historic Site. It is anticipated that planning and research for survey will occur in Year 1 (2014) and Year 2 (2015). Fieldwork for the uplands survey will be accomplished during the third year (FY 2016). Year 4 (FY 2017) efforts will be focused on continued survey of the secondary areas of Chiricahua and completing documentation and archaeological survey of Fort Bowie National Historic Site.

Project planning will take place throughout the first two years, with reconnaissance work occurring during school breaks. Planning and reconnaissance will be conducted primarily by the University Investigator and Supervisory Archaeologist. Additionally, fieldwork will take place in the summers and/or school breaks of years 3 and 4, and will be accomplished by a crew of archaeologists (graduate students) from the University of New Mexico, to be supervised in the field by an experienced crew leader and both direct and indirect supervision by the project leader. The UNM crew will work collaboratively with NPS personnel in the field, with NPS being primarily responsible for site location and mapping. Laboratory analysis will be conducted over the course of the remainder of the year at the University of New Mexico. Each year’s work will be treated in an annual report that will contain project background information, survey and laboratory methodology, description of the archaeological sites and resources encountered during the summer fieldwork, assessment of their conditions, assignment to as specific a cultural/temporal entity as possible, and a discussion of their significance. These topics and the writing of the annual reports will be a task shared by the principal investigator and the students involved in the project, along with NPS personnel.

The budget for this 4-year project was calculated using specific estimates of the necessary field and laboratory time to accomplish the multiple project goals, exclusive of the preservation plan. A careful estimate of the field time that would be required for a 3 person crew to cover the specific areas within Coronado and Chiricahua was compiled, assuming that the 3-person crew would be able to cover an average approximately 45 acres per day. This resulted in an estimate of 29.44 crew days; project planning, laboratory and report preparation time were calculated at twice the number of field days, albeit with a reduced staff of students.