

**REQUEST FOR STATEMENTS OF INTEREST  
N624701328014  
PROJECT TO BE INITIATED IN 2013**

**Project Title: Historical Vegetation Communities (San Clemente Island) and Fire Danger Fuel Moisture Analysis (Marine Corps Base, Camp Pendleton)**

Responses to this Request for Statements of Interest will be used to identify potential investigators for a project to be funded by the Department of the Navy (DoN) Naval Facilities Engineering Command Atlantic (NAVFAC LANT). NAVFAC LANT seeks to develop information on the historic vegetation of San Clemente Island and understand the relationship between fuel moisture, weather and fire size on Marine Corps Base, Camp Pendleton, CA.

**Background:**

The vegetation of San Clemente Island (SCI) underwent massive change due to grazing for over 100 years by feral livestock. In order for the Navy to manage a suite of threatened and endangered species, information on the historic vegetation communities of SCI is needed. This project involves a two pronged approach to obtaining that information. The first approach is to search the national archives to determine if historical information exists. The second approach is to determine whether phytoliths in the soil could be used to determine whether the historic vegetation community differs from the vegetation. The third approach is to develop information to be used to determine the feasibility of field methods to obtain data on the historic plant community. Phytoliths are silica bodies produced in plant roots. These structures remain in the soil profile after plant death and can be used to gain information on the historical plant community. The work will involve a literature review and preliminary lab work identifying phytoliths in species of management interest at SCI. The fourth and fifth approaches involve developing methods for fire danger fuel moisture analysis at Marine Corps Base, Camp Pendleton, CA. These tasks will involve data collection and analysis to evaluate the data to look for correlations among fire ignitions, fire size, moisture and climate data collected.

Camp Pendleton is currently developing methods for fire danger fuel moisture analysis. This project will collect and analyze fuel moisture and associated climate data and look for correlations between them and wildfire ignitions and fire size.

**Description of Requirement:**

The goal is to determine the feasibility of using phytoliths to characterize the historic vegetation of SCI. This will involve both literature review to determine what phytoliths have been described for species of interest that also occur on the mainland (for example grasses such as *Bromus hordeaceus* and *Stipa pulchra* and shrubs such as *Artemisia californica*) and the root architecture of species of management interest. Root architecture is important because of excessive erosion that has occurred on the island, it is possible that many or all of the phytoliths produced shallower rooting species may be gone. The Navy is also working to develop an understanding of the relationship between fire size, fuel moisture and weather on Camp Pendleton.

Specific tasks include:

- 1) Visit the National Archives in Washington D.C. and review all pertinent material prior to about 1920 and submit all documents found that contain information on biological resources of San Clemente Island.
- 2) Develop GIS data for plant community data from the 1860s geographic survey. The write-up for the data shall include an estimate of the accuracy of the data based mapping standards of the time.
- 3) Conduct a literature review to determine whether phytoliths have been identified for species of interest on SCI and rooting depth and volume characteristics of the species of interest.
- 4) Conduct lab studies to identify phytoliths for species of interest at SCI to determine whether phytoliths can be used to identify/differentiate species of interest.
- 5) Collect fuel moisture data weekly. This will be a team effort with the Navy. The Cooperator will conduct sampling efforts at three established fuel moisture sites on Camp Pendleton and process the samples in Computrak fuel moisture analyzers set up on the Base and submit the data to the Navy. This effort typically requires on person approximately 6 to 7 hours exclusive of commute time to the Base.
- 6) Analyze data to see if fuel moisture and/or associated climate data are useful in prediction numbers of ignitions and fire size.

**Materials Requested for Statement of Interest/Qualifications:**

Please provide the following via e-mail attachment to: [tina.gillespie-lucas@navy.mil](mailto:tina.gillespie-lucas@navy.mil)

A brief proposal, maximum length: 10 pages, single-spaced 12 pt. font, addressing the factors listed below.

1. Name, CESU affiliation and contact information
2. Statement of credentials/qualifications of key personnel
3. Project proposal to include timelines, roles and responsibilities of personnel, specific tasks to be conducted, and deliverables. Please be as specific as possible.
4. Cost estimate of the proposed work to include labor, materials and travel. (Note: labor shall include labor category, hourly labor rate and number of hours; materials shall include an itemized breakdown of material, quantity and unit cost and travel shall include number of persons traveling, estimated airfare or privately owned vehicle mileage, estimated rental car and estimated lodging.) **(Note: Option Task 1 - Conduct Additional Fuel Moisture Sampling - may or may not be required. Therefore, please price this option separately)**

**Review of Statements Received:** Proposals will be evaluated based on the four factors listed below and must include the credentials of key personnel, scientific approach, and reasonableness of cost. Evaluation factors are co-equal to each other.

**Factor 1 - Credentials of Key Personnel**

Project Manager - This individual must have:

- a minimum of a Master's degree in Plant Ecology or related science disciplines such as Biology, Ecology, or Computer Science; and
- a minimum of 7 years of experience in a responsible position providing oversight of, support to or directly involved in plant community research; and

Technical Staff - Technical Staff must have:

- a minimum of a Bachelor's degree in geography, or related science discipline; and
- a minimum of a Bachelor's degree in Plant Ecology, or related science discipline
- a minimum of 2 years' experience conducting fuel moisture sampling

**Factor 2 – Scientific Approach** – The Offeror shall develop a proposal addressing the proposed research and management tasks. The Offeror shall discuss their proposed approach and techniques to accomplish the objectives. Offeror's proposals will be evaluated by a team of technical and contracting personnel from NAVFAC Atlantic. This Factor will be evaluated based on:

- The use of methods demonstrated to effectively search the National Archives for biological data related to SCI, and
- Knowledge of and access to the mapping methodologies and standards used in pre-1920 maps
- Knowledge of and experience working with plant root systems
- Experience completing comparable projects.

**Factor 3 – Reasonableness of Cost** – The Offeror's proposals shall be analyzed to determine whether they are balanced with respect to prices or separately priced items, and for fair and reasonable pricing. Evaluations will include an analysis to determine the Offeror's comprehension of the requirements of the solicitation as well as to assess the validity of the Offeror's approach.

**Factor 4 – Technical Approach to Safety**

The Offeror shall provide a narrative of describing how safety practices/procedures will be implemented to complete the proposed work. Proposals shall be analyzed to determine how the Offeror will implement safety practices/procedures and determine the degree to which innovations are being proposed that may enhance safety on this procurement. The Government is seeking to determine that the Offeror has demonstrated a commitment to safety and that the Offeror plans to properly manage and implement safety procedures for itself.

**Please send responses or direct questions to:**

Ms. Tina Gillespie-Lucas - Acquisition  
 Naval Facilities Engineering Command Atlantic  
 6506 Hampton Blvd. Bldg A  
 Norfolk, Virginia 23508

Phone: 757-322-4162 Fax: 757-322-4064

Email: [tina.gillespie-lucas@navy.mil](mailto:tina.gillespie-lucas@navy.mil)

**Timeline for Review of Statements of Interest:** Review of Statements of Interest will begin two weeks from the posting date. This Request for Statements of Interest will remain open until an investigator team is selected.