

**REQUEST FOR STATEMENTS OF INTEREST WITHIN THE  
COOPERATIVE ECOSYSTEM STUDIES UNIT  
PROJECT TO BE INITIATED IN 2014**

**Project Title: GENETIC EVALUATION OF DEL MAR MANZANITA AND  
NUTTALL'S OAK POPULATIONS AT MARINE CORPS AIR STATION MIRAMAR**

Responses to this Request for Statements of Interest (RSOI) will be used to identify potential investigators for a project to be funded by the Department of the Navy (DoN) to evaluate federally endangered Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*) populations against the type species and intermixed manzanita and to evaluate regionally sensitive of Nuttall's scrub oak (*Quercus dumosa*) populations against the type species and intermixed scrub oak within Station locations. The authority for this Cooperative Agreement is 16 USC §670c-1 (Sikes Act). Approximately \$80,000.00 is expected to be available to support this project.

Type of Assistance Instrument Anticipated: Cooperative Agreement

Authority: Sikes Act 16 USC §670c-1(a).

Eligible Applicants: Any potential cooperator who qualifies under the DoDGARS Part 32, 33, and 34 is eligible to apply.

Cost Sharing: Not required

**Background:**

Del Mar manzanita (DMM - *Arctostaphylos glandulosa* ssp. *crassifolia*) is a federally listed plant that has been identified morphologically on Miramar by past surveys along with Eastwood manzanita (EWM – *Arctostaphylos glandulosa*), a common inland species. Since the initial identification of DMM, several taxonomic changes have been made and phylogenetic relationships examined and re-examined. According to previous surveys, DMM is randomly distributed and intermixed with EWM in east Miramar, which is 4 - 5 miles inland. Both DMM and EWM species easily hybridize, according to the literature, and can be difficult to distinguish from one another on a morphological basis. EWM is typical of inland areas more than 3 miles from the coast. DMM type-species is along the coast.

Nuttall's scrub oak (NSO -- *Quercus dumosa*) is a species at risk with potential for listing under the Endangered Species Act. It has been identified to different extents on Miramar during past rare plant surveys. Miramar also has inland scrub oak (ISO -- *Quercus berberidifolia*), which is a more common scrub oak species. The two oaks are difficult to distinguish and have even been confusing to "oak expert" surveyors. Scrub oaks have substantial distribution across Miramar.

**Brief Description of the Anticipated Work:**

We seek to examine Miramar's manzanita populations (DMM and EWM) against the type species, specifically DNA study to include the most accurate techniques, to validate that Miramar does, indeed, have DMM. The objective is to collect Station plant samples and analyze

the subsequent DNA in comparison to the vouchered type species, and to determine whether there are statistically significant differences between the Miramar population and both the type species and co-existing Eastwood manzanita. In particular, the following null hypotheses will be tested by the study:

1. Within each subpopulation (approximately 14 locations), there are no significant differences in the genetic compositions of individuals from the type species.
2. Within each subpopulation, there are no significant differences in the genetic compositions of individuals within each location.
3. Within Station boundaries, there are no significant differences between the genetic compositions of individuals among locations.

We seek to examine Miramar's scrub oak populations (NSO and ISO) against the type species, specifically DNA study to include the most accurate techniques, to validate that Miramar does, indeed, have NSO. The objective is to collect Station plant samples and analyze the subsequent DNA in comparison to the vouchered type species, and to determine whether there are statistically significant differences between the Miramar population and both the type species and co-existing inland scrub oak. At a minimum, the following null hypotheses will be tested by the study:

1. Within existing Miramar population(s), there are no significant differences in the genetic compositions of individuals from the type species.
2. Within existing Miramar population(s), there are no significant differences in the genetic compositions of individuals within each location.
3. Within Station boundaries, there are no significant differences between the genetic compositions of individuals between locations.

**Additionally:**

The Statement of Interest should explain the statistical analysis proposed and means for determining an adequate sample size to test the hypotheses.

The Statement of Interest should present a rationale for DNA comparison, i.e., identification of the most stable DNA for comparison, adequacy for number of DNA comparisons (e.g., mitochondrial DNA, nuclear DNA, and others) required for scientific and regulatory certainty\*, and method outline.

\*Based upon a recent study of California gnatcatcher multilocus DNA sequencing, the results of this study must be defensible both scientifically and legally. (“In denying a petition to delist the California Gnatcatcher, the USFWS (2011:66258) relied on statements such as these: [T]he argument that the California Gnatcatcher is not distinct from other populations is based on a single genetic character, mtDNA, and this is a far too narrow and limited technique for making determinations of taxonomic validity.... [The mtDNA data set alone] does not present substantial information that the current subspecies taxonomic classification of the coastal California Gnatcatcher may be in error.”) *The Auk*, Vol. 130, No. 3 (July 2013), pp. 449-458

**Period of Performance:**

The period of performance for this Cooperative Agreement is expected to be approximately 24 months from date of award, anticipated to be approximately June 2016, although the exact period of work performance will be determined upon award, and will be subject to the Anti-Deficiency Act (31 U.S.C. § 1341).

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

Please provide the following via e-mail attachment to reagan.s.pablo@navy.mil (Maximum length: 6 pages, single-spaced 12 pt. font, single sided each for the Del Mar manzanita and Nuttall's scrub oak. Total page limitation is 12 pages).

Reimbursement of pre-award costs will not be allowed.

1. Name, CESU affiliation and contact information
2. Statement of credentials/qualifications of key personnel
3. Project interest to include timelines, roles and responsibilities of personnel, specific tasks to be conducted, and deliverables. Please be as specific as possible.
4. Narrative of safety practices/procedures.
5. Propose budget to include labor, materials and travel for 24-month period of performance. Please provide your proposed budget on the provided pdf titled, "Research and Related Budget" form.\*

**\*Form: RESEARCH AND RELATED BUDGET**

Complete the Research and Related Budget form in accordance with the instructions on the form. You must provide a detailed cost breakdown of all costs, by cost category, by the funding periods described below, and by task/sub-task corresponding to the task number in the proposed Statement of Work. Options (if applicable) must be separately priced. The form will generate a cumulative budget for the total project period. You must complete all the mandatory information on the form before the NEXT PERIOD button is activated. You may request funds under any of the categories listed as long as the item and amount are necessary to perform the proposed work and meet all the criteria for allowability under the applicable Federal cost principles. The budget should adhere to the following guidelines:

The budget should be driven by program requirements. Elements of the budget shall include:

- Direct Labor - Individual labor category or person, with associated labor hours and unburdened direct labor rates.
- Indirect Costs - Fringe benefits, overhead, G&A, COM, etc. (must show base amount and rate). Justify in Field K.
- Travel - Number of trips, destination, duration, etc. Justify in Field K (on the form).

- Subcontract - A cost proposal as detailed as the applicant's cost proposal will be required to be submitted by the subcontractor. If applicable, include in Research & Related Subaward Budget Attachment Form.
- Consultant - Provide consultant agreement or other document that verifies the proposed loaded daily/hourly rate. Include a description of the nature of and the need for any consultant's participation. Strong justification must be provided, and consultants are to be used only under exceptional circumstances where no equivalent expertise can be found at a participating university. Provide budget justification in Field K.
- Materials - Specifically itemized with costs or estimated costs. An explanation of any estimating factors, including their derivation and application, shall be provided. Include a brief description of the applicant's procurement method to be used (competition, engineering estimate, market survey, etc.). Justify in Field K.
- Other Directs Costs - Particularly any proposed items of equipment or facilities. Equipment and facilities generally must be furnished by the cooperator/recipient (justifications must be provided when Government funding for such items is sought). Include a brief description of the applicant's procurement method to be used (competition, engineering estimate, market survey, etc.). Justify in Field K.

Budget Justification (Field K on the form): Provide the required supporting information for the cost elements as shown above (see Research & Related Budget instructions) and listed as follows: indirect cost, travel, consultant, materials, and other direct costs. Provide any other information you wish to submit to justify your budget request.

**Review of Statements Received:** Based on a review of the Statements of Interest received, an investigator or investigators will be invited to prepare a full study proposal. Statements will be evaluated based on the three factors listed below and include the credentials of key personnel, scientific approach, and the reasonableness of cost. Evaluation factors are approximately equal to each other.

**Factor 1 - Credentials of Key Personnel**  
**Project Manager. This individual must have:**

- a minimum of a PhD in Biology or related science disciplines;
- a publication record demonstrating expert knowledge of genetic techniques appropriate for evaluating plant DNA;
- a minimum of 5 years' experience in a responsible position providing oversight of genetic studies of similar scope; and
- a USFWS collection permit for Del Mar manzanita.

**Technical Staff. This individual(s) must have:**

- a minimum of a Master's in biology or related science disciplines;
- demonstrated knowledge of genetic techniques appropriate for analyzing plant DNA;
- a minimum of 3 years' experience performing endangered plant species collection, DNA study, and/or statistical analysis; and

- a USFWS collection permit for Del Mar manzanita.

**Factor 2 – Scientific Approach** – The Offeror shall develop an outlining their approach to addressing the null hypotheses stated above. Scientific acceptability/defense should be stated. The Offeror may also propose additional null hypotheses to test, that include an outline of the approach, not mentioned in this RSOI, but pertinent to the study issues.

**Factor 3 – Reasonableness of Cost** – After technical evaluation of the proposal, the Offers shall be analyzed to determine whether they are materially/mathematically balanced with respect to prices or separately priced items, and for fair and reasonable pricing. A clear cost breakdown of work elements to be accomplished detailing quantities for the various work items, unit, unit prices and extended prices will be required and will be evaluated. Evaluation will include an analysis to determine the Offeror’s comprehension of the requirements of the proposed agreement as well as to assess the validity of the Offeror’s approach.

**Relative Importance of Evaluation Factors** - Factor 1, Credentials of the Key Personnel, Factor 2, Scientific Approach and Factor 3, Reasonableness of Cost are approximately equal.

**Timeline for Review of Statements of Interest:**

We request that Statements of Interest be submitted by Monday April 28, 2014 1400 PST. This Request for Statements of Interest will remain open until an investigator team is selected.

**Please send electronic responses and questions to:**

Mr. Reagan Pablo, Contract Specialist Environmental Acquisition Core  
[Reagan.s.pablo@navy.mil](mailto:Reagan.s.pablo@navy.mil)

**Point of Contact Information:**

Mr. Reagan Pablo, Contract Specialist Environmental Acquisition Core  
Naval Facilities Engineering Command Southwest  
1220 Pacific Highway  
San Diego, CA 92132  
619.532.1592