REQUEST FOR STATEMENTS OF INTEREST WITHIN THE COOPERATIVE ECOSYSTEM STUDIES UNIT INTEREST
N62473-22-2-0007
PROJECT TO BE INITIATED IN 2022

Project Title: Study of Abalone Reproductive Biology in Support of Black Abalone Recovery at Naval Auxiliary Landing Field San Clemente Island, California

Responses to this Request for Statements of Interest (RSOI) will address advancing recovery efforts of endangered black abalone located on San Clemente Island (SCI) and bridge gaps in knowledge summarized in the National Marine Fisheries Service (NMFS) 2018 Black Abalone Recovery Plan at SCI. Approximately $145,213.26 is expected to be available to support the Base Period requirements of this project. An option period may be awarded and is currently contemplated for award in fall of 2023 within the last 6 months of the 18-month base period.

Item	Estimated Funding
Base Period	$145,213.26
Option Period 1	$148,057.81

Type of Assistance Instrument Anticipated: Cooperative Agreement

Authority: Cooperative Agreement under 16 USC §670c-1

Eligible Applicants: Any Californian Cooperative Ecosystem Studies Unit cooperative partner who qualifies under the DoDGARS Part 34 or 2 Code of Federal Regulations 200 is eligible to apply.

Cost Sharing: Not required

Background: Abalone are marine mollusks that were historically abundant in rocky reefs in Southern California and its offshore islands and banks. San Clemente Island (SCI) has one of the last remaining populations of black abalone (Haliotis cracherodii) in southern California. Beginning in 1981, the mainland black abalone populations experienced large scale mortality events associated with a disease called withering syndrome. Eventually, populations declined dramatically throughout their range, including those on SCI. Due to the substantial decrease in population size, National Marine Fisheries Service (NMFS) listed the black abalone as endangered under the Endangered Species Act in January 2009 (74 FR 1937). Additionally, NMFS designated critical habitat for black abalone and identified the principal threats to black abalone as withering syndrome and associated conditions that may promote the spread of the disease (e.g., suboptimal water temperatures and introduction of infected animals into previously unaffected areas). However, SCI received a critical habitat exclusion based on determinations that the Navy's SCI Integrated Natural Resource Management Plan (INRMP) provides benefits to black abalone.

Through proactive management efforts, the Navy is able to maintain both sustainable military and fleet readiness and conserve its sensitive marine resources with no net loss to the mission. This is accomplished through annual rocky intertidal and abalone population monitoring conducted by the Navy. Additionally, the Navy has recently funded the development of the use of non-invasive ultrasonography to assess reproductive state in red abalone (H. rufescens) cultured under ambient ocean conditions as a proxy for endangered black abalone on SCI (Cooperative Agreement N62473-19-2-0023). However, additional research on climate-driven changes on reproductive development and larval recruitment are required. This project will investigate the effects of ocean warming and acidification on the direct effects of nutritional

quality of abalone food sources and how that translates to reproductive development as well as evaluate methods necessary for successful spawning and larval recruitment.

The purpose of this agreement is to document climate-driven changes in abalone gonadal development associated with diet using non-invasive ultrasonography in efforts to advance recovery efforts of endangered black abalone located on SCI and bridge gaps in knowledge summarized in the National Marine Fisheries Service (NMFS) 2018 Black Abalone Recovery Plan. Several aspects of black abalone biology and life history are unknown or uncertain but important for assessing the status and recovery of the species. In particular, there is little knowledge of the species' spawning habits (e.g., optimal spawning season, habitat quality, etc.) and larval recruitment dynamics, largely due to the difficulties associated with working in rocky intertidal habitats, the cryptic nature of newly settled larvae and juveniles, and the lack of consistent methods to spawn black abalone in captivity. Filling these key gaps in information will enhance the recovery of these endangered abalone. Specifically, this research project will contribute to Recovery Action Plan 3.2.4, which guides agency stakeholders to establish a successful captive breeding program in order to conduct species specific research and to restock dwindling wild populations.

The principal components of this cooperative agreement are to utilize red abalone (H. rufescens) as a surrogate to: (1) compare the effect of various climate-induced changes on red abalone reproduction by monitoring gonadal development using non-invasive ultrasonography and other non-invasive methods, (2) collaborate with black abalone conservation stakeholders and other Navy funded black abalone researchers, and (3) assemble research findings in a draft and a final document.

Brief Description of the Anticipated Work:
The Department of the Navy (DoN) is seeking statements of interest that address the objective to (1) develop best practices around nutrient mobilization for black abalone broodstock husbandry, (2) the objective to determine reproductive and nutritional state of black abalone using noninvasive ultrasonography and other noninvasive methodology, and (3) the objective to establish techniques to induce black abalone spawning and refine the subsequent larval culture at Naval Auxiliary Landing Field, San Clemente Island, California ("SCI"). Generally, the Navy's historic preservation requirements are to support the black abalone conservation and recovery program at SCI.

Please see enclosure 1 for full scope of work and enclosure 2 for applicable terms and conditions.

Period of Performance:
The period of performance covered by this agreement is 18 months upon award. The Cooperative Agreement will have one (1) 18-month base period. The period may be extended by written modification. The exact period of work performance will be determined upon award, the award of any optional work elements will be subject to the Anti-Deficiency Act (31 U.S.C. § 1341). The end date is the anticipated date that the Final Report is accepted by the Government.

Period	Period of Performance	Anticipated Award Date
Base Period	Date of Award – 18 Months	Fall 2022
Option Period 1	Date of Award – 18 Months	Fall 2023

Materials Requested for Statement of Interest/Qualifications: Please provide the following via e-mail attachment to:

- Kevin Magennis, Contract Specialist Environmental Acquisition Core (kevin.e.magennis.civ@us.navy.mil); and

- Devon Gilpatrick, Contract Specialist Environmental Acquisition Core

(devon.j.gilpatrick.civ@us.navy.mil**).**

1) SF 424 (Enclosure 3)

2) Research & Related Senior/Key Personnel Form (Enclosure 4). Please see Factor 1 for additional submittal requirements.

3) Research and Related Budget Form (Enclosure 5)

4) SF-LLL Disclosure of Lobbying Activities (Enclosure 6). If applicable, complete SF- LLL. Applicability: If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the grant/cooperative agreement, you must complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying."

*Please note, that some of the forms functionality may be lost. Please visit https://www.grants.gov/web/grants/forms/r-r-family.html#sortby=1 to retrieve the forms directly from the Grants.gov website.

**Reimbursement of pre-award costs will not be allowed.

Review of Statements Received: Proposals will be evaluated based on the following three factors: 1) Credentials of Key Personnel, 2) Scientific Approach, and 3) Reasonableness of Cost.

NOTE: All requirements listed are minimum requirements. Offerors will be assessed on their ability to adhere to the listed requirements, completeness of responses, follow directions, comply with restrictions and provide quality control on their submittals. All page limits refer to 12 point font and single spaced one-sided pages.

Factor 1 - Credentials of Key Personnel

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

i. A PhD in Animal Science/Reproductive Biology or related science;

ii. Experience evaluating the effects of environmental stressors on aquatic animal reproduction; and

iii. At least 10 years of experience in the domain of marine invertebrate reproduction and culture methodology.

B. Postdoctoral Researcher: The Recipient shall designate one person as responsible for abalone culture and data collection. This person shall have, at minimum:

i. A PhD in aquaculture, marine biology, animal science, or a closely related field;

ii. Expert knowledge in domain of marine shellfish aquaculture methodology, preferentially expertise in gastropod reproductive biology; and

iii. Ability to work efficiently in the field or at offsite facilities as well as independently and within research teams.

With the Research & Related Senior/Key Personnel Form, the Applicant shall provide typed written resumes, not to exceed 3 pages, single spaced with 12pt font for the Principal Investigator and Postdoctoral Researcher. Resumes must state qualifications, experience with this type of project, professional registration and certificates.

Factor 2 – Scientific Approach

Not to exceed 3 pages, the Offeror shall develop an outline for their approach to addressing the anticipated work stated above. The Offeror shall be evaluated as to the soundness of the overall approach and use of any innovative techniques to accomplish project objectives.

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.

Please provide your proposed budget on the provided pdf titled, "Research and Related Budget" form*(Enclosure 5).

***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. 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.

NOTE: Every deviation from the scope of work requirement must be identified. Proposer must identify the paragraph in the scope of work that is applicable and provide sufficient information to justify why the deviation is in the best interest of the government.

RELATIVE IMPORTANCE OF EVALUATION FACTORS – Factor 1, 2, and 3 are of equal importance.

Timeline for Review of Statements of Interest:
We request that Statements of Interest be submitted by September 14, 2022 2:00 PM PDT. This Request for Statements of Interest will remain open until an investigator team is selected. Statements of Interest received after September 14, 2022 2:00 PM PDT is considered "late" and may not be considered. Please submit requests for information/questions no later than September 12, 2022 2:00 PM PDT.

Please send electronic responses and questions to:

- Kevin Magennis, Contract Specialist Environmental Acquisition Core (kevin.e.magennis.civ@us.navy.mil); and

- Devon Gilpatrick, Contract Specialist Environmental Acquisition Core **(**devon.j.gilpatrick.civ@us.navy.mil**).**

Point of Contact Information:
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