

Request for Proposal:

Research using Remote Sensing via Aerial Systems to Survey Marine Coastal Pelagic Species



Issue Date: October 17, 2022

Deadline for Proposal Submissions: November 22, 2022

Proposal Schedule

- October 17, 2022: Request for Proposal (RFP) issued and distributed
- October 28, 2022: Deadline for written questions regarding this RFP
Please email questions to Michael Arredondo at marredondo@psmfc.org
- November 15, 2022: Q&A document, including the answer to the written questions posted on the PSMFC website at: <http://www.psmfc.org/procurements>
- November 22, 2022: Proposal must be submitted by e-mail to: marredondo@psmfc.org
Subject line for submissions: **Research using Remote Sensing via Aerial Systems to Survey Marine Coastal Pelagic Species**
Faxed and hard copy proposal will not be accepted.
- November 23, 2022 –
December 21, 2022: Proposal review
- January 20, 2023 Proposal applicants notified of recommendations
- January 31, 2023 -
July 31, 2024: Anticipated Project Period

Funding Opportunity Description

Summary

The Pacific States Marine Fisheries Commission (PSMFC), in cooperation with the National Oceanic Atmospheric Administration (NOAA) and the California Department of Fish and Wildlife (CDFW), will be issuing a \$96,653 grant to fund a project that utilizes remote sensing to improve monitoring of Coastal Pelagic Species (CPS) stocks along the California coast.

Work must be completed by July 31, 2024.

Background

Since 2012, the CDFW has conducted the aerial California CPS Survey to document Pacific Sardine and Northern Anchovy in the nearshore waters of the Southern California Bight. This survey expanded to cover nearshore waters off Northern California beginning in summer of 2017. Surveys currently utilize trained visual observers to estimate fish biomass, and there is growing interest to digitize observations. Advances in photogrammetric cameras, sensors, and computer software allow for the potential to develop and apply a more rigorous and repeatable biomass estimate calculation to ensure standardization of long-term datasets. The goal of this project is to explore alternative data acquisition and processing methods using aerial systems (crewed or uncrewed) to collect imagery and process data to inform aerial survey methodology. Survey data support CPS stock assessments and management.

CDFW will be looking for an applicant to fulfill these objectives:

1. Calculate the relative size/volume (e.g., biomass) of CPS schools from areal extent by utilizing historical survey non-nadir RGB imagery catalog and observer estimates, and/or other spatial datasets, and document the methodology used to do so;
2. Mobilize to different regions of the state to search for CPS in coordination with the CDFW partners, established CPS aerial surveys, or fishing vessels;
3. Obtain georeferenced photogrammetric and sensor-based imagery including RGB images and multi-spectral sensory data of CPS using an uncrewed aerial system platform from an at-sea research vessel and/or through a system on a crewed aircraft;
4. Estimate the areal extent (surface area) of CPS schools from imagery and document the methodology used to do so;
5. Determine the maximum angle at which imagery can be acquired to still provide an accurate and repeatable areal extent of objects detected.
6. Provide spatially referenced data including, but not limited to, surface areas, spectral characteristics, bathymetry, scale, resolution, altitude, and image tags as a data package to allow for examination of observed CPS in relation to other spatial datasets;
7. Provide high-quality georeferenced spectral and RGB imagery that capture the entire areal footprint of CPS schools; and
8. Determine the feasibility of using spectral data either exclusively or in conjunction with spatial or temporal metrics to distinguish individual CPS and determine school size (e.g., biomass). Document these results and if use of spectral signatures to define composition is not feasible, provide information on additional resources or expertise that may be required.
9. Develop recommendations for a production flow to collect imagery and field observations that can be scaled up for use in a crewed aircraft.

The Pacific States Marine Fisheries Commission (PSMFC) will be issuing \$96,653 in grants to a qualified applicant.

Successful award of grant funds does not relieve the recipient from the responsibility to obtain any other required permit(s), or comply with any other Federal, State, or local laws and regulations.

Eligible Applicants

Researchers at U.S. academic institutions, research laboratories, for-profit companies/firms, nonprofits, and state agencies are all eligible. Proposals from foreign entities are not eligible. Proposals involving multiple investigators are welcome. Any U.S. federal government agencies, including Regional Fishery Management Councils are not eligible to receive funding through this solicitation.

Application and Submission Information

FULL PROPOSALS CONTENT

The full proposal format must be in at least a **12-point font**. Brevity will assist reviewers and program staff in dealing effectively with proposals. Tables and visual materials, including charts, graphs, maps, photographs and other pictorial presentations are included in the **5-page proposal limit**. Data management plans and/or access agreements as well as budgets and justifications, project summary, and previous, current and pending support sections do not count towards the page limit. Appendices may include information such as resumes and/or letters of endorsement.

Additional informational material will be disregarded.

Proposal must include the following information in the format outlined below.

a. Project summary (1-page limit):

- (1) Organization title.
- (2) Principal Investigator(s) (PI).
- (3) Address, telephone number, and email address of Principal Investigator(s).
- (4) Project title.
- (5) Project objectives for the project period.
- (6) Summary of work to be performed within the project period.
- (7) Summary of required state/federal permits to conduct work
- (8) Budget Information
 - Total funds requested from PSMFC;
 - Current and pending support (if applicable)
 - Cost sharing to be provided to this project, if any (not required). Specify whether contributions are cash or in kind;
 - Total project cost.

b. Project description (5 page limit): The project must be completely and accurately described. The main body of the proposal should be a clear statement of the work to be undertaken and should include: specific objectives and performance measures for the period of the proposed work and the expected significance; relation to longer-term goals of the project; and relation to other work planned, anticipated, or underway.

c. Project Budget: You must include in the proposal a detailed narrative for each category providing an explanation and/or process for how the funds will be used and/or allocated. Describe and justify the budget for each organization or agency requesting funding in this proposal using the mandatory budget categories listed below.

- **Personnel (including Fringe Benefits):** Include the salary detail for all employees assigned to this project. Explain the duties for each individual identified by name and position. State the time commitments such as hours and percent of time for each position. List the total charges for each person. Provide detail on all fringe benefits in correlation to the employee's hourly wage and the number of hours to be worked in association with the proposed project. Identify what types of fringe benefits are being covered. Describe the total charges for each person listed along with an explanation of how the charges were calculated.

- **Travel:** These costs include lodging, airfare, per diem, ground transportation and

other directly related expenses incurred while traveling for the purpose of the proposed project. Include each traveler's name, dates of travel, purpose of travel, destination, and itemized costs to include lodging, airfare, per diem, ground transportation, etc. Identify why the requested travel is directly relevant to the successful completion of the project. If there are any actual trip details that remain unknown, please explain what the basis for the proposed travel charges.

- **Contractual:** Include all expenditures associated with contractually-related activities that are directly associated with the proposed project. List each contract as a separate item. Describe the applicability to the project for each contract to be acquired.

- **Supplies:** Include a description of all equipment that individually costs under \$5,000 and miscellaneous supplies and materials that are required for the purpose of the proposed project. Itemize supplies by type of material or nature of expense. Identify how the proposed supplies are necessary for the successful completion of the project.

- **Equipment:** Include items that individually cost more than \$5,000. For any items of equipment whose costs exceed \$5,000, a description of the item and associated costs is required. List each item of equipment being requested. For each item of equipment, please identify the number of units, cost per unit and total cost specified. Explain why each item of equipment is necessary for the successful completion of the project.

- **Indirect Costs:** These are costs incurred by the investigating organization as a result of administering the proposed project but not directly associated with project implementation. Indirect costs generally include space rental, utilities, postage, data processing, training, safety management, affirmative action programs, administrative support, and supervisory oversight. **NOTE:** All proposals must include copy of the approved negotiated indirect cost rate document or similar verifying your indirect rate as part of your proposal package. Our intent is that institutions undertaking research apply funds to expenses directly related to the project and have the ability to complete the project with low indirect cost rates.

Instructions, Conditions and Notices to Proposers

1. Questions regarding this RFP shall be submitted in writing no later than **October 28, 2022** to:

Michael Arredondo
205 SE Spokane Street, Suite 100
Portland, OR 97202
Email: marredondo@psmf.org
Phone: (503) 595 - 3100
Fax: (503) 595 - 3444

The subject line of emailed questions must be entitled: "Research Using Remote Sensing via Aerial Systems to Survey Marine Coastal Pelagic Species".

The answers to the written questions will be posted on PSMFC's website by **November 15, 2022**

2. Amendments to the Solicitation

If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Proposers shall acknowledge receipt of any amendment to this solicitation in Proposer's cover letter.

3. Submission, Modification Revision and Withdrawal of Proposal

a. The deadline for proposal is **November 22, 2022**:

Attn: Michael Arredondo
205 SE Spokane Street, Suite 100
Portland, OR 97202
Email: marredondo@psmfc.org
Phone: (503) 595 – 3100
Fax: (503) 595 – 3444

b. PSMFC reserves the right to consult with and to consider information from its own sources, including information from state and federal agencies regarding the proposer's prior performance or the status of outstanding investigations or warrants involving the proposer.

c. Late proposals

i. Any proposal, modification, or revision at the PSMFC office designated in the solicitation after the exact time specified for receipt to offers is "late" and will not be considered unless it is received before award is made, the PSMFC Fiscal Manager determines that accepting the late offer would not unduly delay the acquisition; and

ii. There is acceptable evidence to establish that it was received at the PSMFC installation designation for receipt of offers and was under the PSMFC's control prior to the time set for receipt to offers; or

iii. It is the only proposal received.

iv. However, a late modification of an otherwise successful proposal that makes its terms more favorable to the PSMFC, will be considered at any time it is received and may be accepted.

v. Acceptable evidence to establish time of receipt at the PSMFC installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of PSMFC personnel.

d. If an emergency or unanticipated event interrupts normal PSMFC processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent PSMFC requirements preclude

amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the firstwork day on which normal PSMFC processes resume.

e. Proposals may be withdrawn by written notice received at any time before award. Proposals may be withdrawn in person by an offer or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

f. Proposers shall submit proposals in response to this solicitation in English and in U.S. dollars.

g. Proposers may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

h. Proposers may submit revised proposals only if requested or allowed by PSMFC.

i. Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Fiscal Manager.

j. Each Proposal must state that it is a firm offer, which may be accepted within a periodof ninety (90) days. Although the contract is expected to be awarded prior to that time, the ninety-day period is requested in order to allow for unforeseeable delays.

k. Proposer shall submit the name, address, and telephone number of the person(s) with the authority to bind the firm, as well as to answer questions or provide clarification concerning the firm's proposal.

l. PSMFC is not liable for any costs incurred by vendors/contractors in developing or submitting their response to this RFP.

Proposal Evaluation

1. All proposals received in accordance with these RFP instructions will be evaluated to determine if they are complete and meet the requirements specified in this RFP.

2. All proposals received in accordance with these RFP instructions will be reviewed, analyzed, evaluated and scored in accordance with the criteria described below. If needed, additional information may be requested from one or more proposers.

3. Request for additional information. During the evaluation period, PSMFC may request additional information in order to fairly evaluate a proposer's offer. If such information is required, the proposer will be notified in writing (or by email) and will be permitted a reasonable period of time to respond.

4. Evaluation Criteria. By use of numerical and narrative scoring techniques, full proposals will be evaluated against the factors specified below. The relative weights of the criteria –based on a 130-point scale – are shown in the table below. Project must achieve a minimum qualifying score of 80 points. The evaluation criteria are as follows:

Evaluation Criteria	Points Possible
<p>1. The experience of Project Manager –</p> <p>Project Manager Score: <i>Less than 5 years of experience will result in automatic disqualification from RFP. Does not meet minimum qualifications.</i></p> <p><i>8 points = 5-10 years of experience</i> <i>10 points = 11-15 years of experience</i> <i>15 points = 15+ years of experience</i></p>	15
<p>2. The firm's/team's technical approach, procedures, and methods to successfully operate uncrewed aerial systems at sea from a research vessel or equip crewed aerial systems to collect high-resolution georeferenced aerial imagery of marine wildlife in a manner that accomplishes the stated project objectives –</p> <p><i>0 points = Technical approach and methods documented are inadequate to achieve stated objectives. The omissions, flaws, or deficiencies are significant and unacceptable.</i> <i>15 points = Technical approach and methods are barely adequate to achieve stated objectives. The omissions, flaws, or deficiencies are insignificant and acceptable.</i> <i>20 points = Technical approach and methods are more than adequate to achieve stated objectives. No omissions or flaws are apparent.</i> <i>25 points = Technical approach and methods are more than adequate to achieve stated objectives. Proposer offers one or more enhancing capability that will benefit the State.</i></p>	25
<p>3. The firm's/team's demonstrated experience providing uncrewed or crewed aerial survey data to state or federal government agencies. Experience must include operating uncrewed aerial surveys in a marine environment and from vessels at sea.</p> <p><i>0 points = No demonstrated experience working with state or federal agencies</i> <i>5 points = Experience providing data through at least one but not more than 5 projects.</i> <i>10 points = Experience providing data through at least 6 but not more than 10 projects</i> <i>15 points = Experience providing data through at least 11 or more projects</i></p>	15
<p>4. The firm's/team's technical approach, procedures, and methods to process and analyze digital RGB imagery (nadir and non-nadir) and observer estimates to determine the relative size of CPS schools in a manner that accomplishes the stated project objectives –</p>	

<p><i>0 points = Technical approach and methods documented are inadequate to achieve stated objectives. The omissions, flaws, or deficiencies are significant and unacceptable.</i></p> <p><i>10 points = Technical approach and methods are barely adequate to achieve stated objectives. The omissions, flaws, or deficiencies are insignificant and acceptable.</i></p> <p><i>15 points = Technical approach and methods are more than adequate to achieve stated objectives. No omissions or flaws are apparent.</i></p> <p><i>20 points = Technical approach and methods are more than adequate to achieve stated objectives. Proposer offers one or more enhancing capability that will benefit the State.</i></p>	20
<p>5. The firm's/team's technical approach (years of experience), procedures, and methods to manage relational data, explore and interpret different types of imagery, including multispectral, for usefulness and value in estimating a relative volume/biomass for CPS schools in a manner that accomplishes the stated project objectives –</p> <p><i>0 points = Technical approach (0 years) and methods documented are inadequate to achieve stated objectives. The omissions, flaws, or deficiencies are significant and unacceptable.</i></p> <p><i>5 points = Technical approach (1-2 years) and methods are barely adequate to achieve stated objectives. The omissions, flaws, or deficiencies are insignificant and acceptable.</i></p> <p><i>10 points = Technical approach (3-5 years) and methods are more than adequate to achieve stated objectives. No omissions or flaws are apparent.</i></p> <p><i>15 points = Technical approach (5+ years) and methods are more than adequate to achieve stated objectives. Proposer offers one or more enhancing capability that will benefit the State.</i></p>	15
<p>6. The firm's/ team's ability to mobilize and be on-site within 24 hours due to timing constraints associated with weather, the ability to locate fish schools, and the need to coordinate with technicians in the field.</p> <p><i>0 points = Cannot be on-site within a 24-hour notice period.</i></p> <p><i>25 points = Can be on-site within a 24-hour notice period</i></p>	25
<p>7. The firm's/team's detailed project budget narrative for each category providing an explanation and/or process for how the funds will be used and/or allocated.</p> <p><i>0 points = No detailed project budget narrative</i></p> <p><i>10 points = Provide detailed project budget narrative</i></p>	10
<p>8. Overall quality, clarity and completeness of the written submittal –</p> <p><i>3 points = Submittal does not articulate concepts clearly and/or submittal has six (6) or more formatting and/or grammatical errors</i></p> <p><i>4 points = Submittal articulates concepts clearly; submittal has one (1) or more formatting and/or grammatical errors</i></p> <p><i>5 points = Articulates concepts clearly and has no formatting or grammatical errors</i></p>	5
Total Points Possible	130

Conflict of Interest

A conflict of interest exists when financial interests or other opportunities for tangible personal or professional benefit could influence or appear to influence the professional judgment of a member of the Proposal Review Committee. Improper influence could be used to not only advance one's own research program, but also to unfairly promote a family member's, colleague's or former student's program. Thus, care must be exercised to avoid a conflict of interest during the proposal review process and the discussion of past, current or proposed research. A conflict of interest also exists when circumstances simply have the appearance of compromising the professional judgement of a member of the Proposal Review Committee. It is the policy of PSMFC that conflicts of interest or the appearance of conflicts of interest shall be avoided wherever possible and disclosed and minimized in situations where interests cannot be reasonably separated. Whenever a conflict of interest arises during discussions of the Proposal Review Committee, the member in question shall disclose the possible conflict and excuse themselves from the discussion.

Grant Award

1. All qualified proposals will be evaluated, and awards will be made to those proposed project whose combination of cost and technical offers is deemed to best address the research themes of this RFP. It is expected that the final awards to selected project will begin on **January 31, 2023**.
2. PSMFC reserves the right to make an award for project at a cost that is less than what was proposed.
3. PSMFC expressly reserves the right to reject any and all proposals and make no award under this RFP if such action is in the best interest of the PSMFC.