

Early Stage Propagation Strategies for Aquaculture Species

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NOTICE OF FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

Federal Agency Name(s): Oceanic and Atmospheric Research (OAR), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce

Funding Opportunity Title: Early Stage Propagation Strategies for Aquaculture Species

Announcement Type: Initial

Funding Opportunity Number: NOAA-OAR-SG-2022-2007053

Catalog of Federal Domestic Assistance (CFDA) Number: 11.417, Sea Grant Support

Dates: Notices to Submit due: 11/16/2021; Full Proposals due: 2/3/2022

Funding Opportunity Description: The National Sea Grant College Program was enacted by U.S. Congress in 1966 (amended in 2020, Public Law 116-221) to support leveraged federal and state partnerships that harness the intellectual capacity of the nation's universities and research institutions to solve problems and generate opportunities in coastal communities.

Subject to the availability of funding, Sea Grant anticipates approximately \$4,000,000 will be available for research projects and programs that will develop and refine early stage propagation strategies (e.g., reproduction, hatchery, and/or nursery strategies) for aquaculture species (defined below) to supply on-growing operations. Successful proposals will address topical needs (described below) and integrate research and extension. Proposals are sought that will support broad, non-proprietary research to address critical gaps with respect to early stage propagation strategies for aquaculture species; make that information available to U.S. aquaculture businesses; and include Sea Grant aquaculture extension personnel and preferably industry stakeholders. These investments are consistent with Sea Grant's focus area of Sustainable Fisheries and Aquaculture (SFA) and the Sea Grant Network's 10-year Aquaculture Vision, both which support NOAA and Department of Commerce aquaculture goals. Proposals must include funding (federal or match) for Sea Grant extension personnel as collaborators. Industry stakeholder participation/involvement in projects is strongly encouraged.

This opportunity is open only to: Sea Grant programs (Sea Grant Colleges, Institutions, or Coherent Area Programs). A Sea Grant program may submit or participate in more than one proposal. Please note that it is not a requirement that investigators, including the PI, are part of a Sea Grant program, however proposals must be submitted with and through a Sea Grant program. Contact information for each program can be found at <https://seagrant.noaa.gov/About>. All 34 Sea Grant programs are eligible to serve as partners and to submit applications. If you

need further assistance in identifying a program to partner with please contact the National Sea Grant Office via email at oar.hq.sg.aquaculture@noaa.gov.

This document sets out requirements for submitting to NOAA-OAR-SG-2022-2007053. Additional guidance and tips on how best to prepare an application are provided in the Sea Grant General Application Guide available at (<https://seagrant.noaa.gov/Portals/1/Guidance/SeaGrantGeneralApplicationGuide.pdf>).

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program Objective

NOAA provides funding to Sea Grant institutions to increase the understanding, assessment, development, management, utilization, and conservation of the nation's ocean, coastal, and Great Lakes resources. NOAA provides assistance to promote a strong educational base, responsive research and training activities, broad and prompt dissemination of knowledge and techniques, and multidisciplinary approaches to environmental problems in accordance with 33 USC 1121(b).

The U.S. has an opportunity to sustainably increase aquaculture production in marine systems (ocean, coastal, and Great Lakes) while increasing the economic resilience and nutritional security of communities across the country. Farming of finfish, shellfish, sea vegetables/algae, and other aquaculture provides great potential in the U.S. for increasing the supply of ocean and Great Lakes-sourced products while supporting and growing rural and coastal communities and economies.

This competition focuses on research projects and programs that will develop and refine early stage propagation strategies (e.g. reproduction, hatchery, and/or nursery strategies) for aquaculture species excluding selected marine finfish species for food. A total of 19 of these species (listed below) are the focus of the concurrent competition titled, "Marine Finfish Aquaculture: Juvenile Production Technologies," NOFO number: NOAA-OAR-SG-2022-2007054.

- Almaco jack, *Seriola rivoliana*
- Atlantic cod, *Gadus morhua*
- Black sea bass, *Centropristis striata*
- California yellowtail, *Seriola lalandi*
- Cobia, *Rachycentron canadum*
- Florida pompano, *Trachinotus carolinus*
- Olive flounder, *Paralichthys olivaceus*
- Red drum, *Sciaenops ocellatus*
- Sablefish, *Anoplopoma fimbria*
- Spotted wolffish, *Anarhichas minor*
- Striped bass, *Morone saxatilis*
- White sea bass, *Atractoscion nobilis*
- California halibut, *Paralichthys californicus*

- Spotted seatrout, *Cynoscion nebulosus*
- Greater amberjack, *Seriola dumerili*
- Southern flounder, *Paralichthys lethostigma*
- Summer flounder, *Paralichthys dentatus*
- Tripletail, *Lobotes surinamensis*
- Steelhead trout, *Oncorhynchus mykiss*

If your application addresses any of these species it should be submitted to the concurrent competition (“Marine Finfish Aquaculture: Juvenile Production Technologies,” NOFO number: NOAA-OAR-SG-2022-2007054).

The overall goal of this competition (“Early Stage Propagation Strategies for Aquaculture Species,” NOFO number: NOAA-OAR-SG-2022-2007053) is to develop and refine early stage propagation strategies of aquaculture species (not included in the list above) to support on-growing operations.

Strong applications will address program priorities described below and will integrate research and extension. Proposals are sought that support broad, non-proprietary research to develop and refine early stage propagation strategies, such as reproduction, hatchery, and/or nursery strategies, for aquaculture species; make that information available to U.S. coastal and Great Lakes aquaculture businesses; and include Sea Grant aquaculture extension personnel and also preferably industry stakeholders.

Principal investigators of proposals selected for funding will be required to participate in an annual National Sea Grant Aquaculture Symposium to share results of work conducted, discuss challenges, and to plan next steps.

B. Program Priorities

An essential aspect of production of aquacultured species is a reliable and consistent supply of organisms for on-growing operations. This competition is focused on funding research projects and programs that will advance development and refinement of early stage propagation strategies, such as reproduction, hatchery, and/or nursery strategies, for aquaculture species excluding selected marine finfish species (see above). Aquaculture categories (organisms) eligible for this competition are:

- Microalgae and macroalgae (seaweed)
- Molluscs
- Crustaceans
- Ornamental finfish

- Baitfish
- Finfish species (marine and freshwater) not specified in the concurrent NOFO (NOAA-OAR-SG-2022-2007054)
- Misc. invertebrates

The above criteria should lead to the selection of proposals that: 1) address development and refinement of early stage propagation strategies for the production of aquaculture species; 2) demonstrate that the work proposed will meaningfully advance the commercialization of the species being studied; and 3) demonstrate a plan to extend the results of work to industry stakeholders in the U.S. The involvement of industry stakeholders is also strongly encouraged.

Successful applications will:

--Demonstrate a clear understanding of current limitations and research needs regarding early stage propagation strategies (e.g. reproduction, hatchery, and/or nursery strategies) for aquaculture categories/organisms listed above.

--Increase the knowledge base of various aspects of early stage propagation of species with the overall goal of achieving a reliable and consistent supply of organisms necessary to sustain commercially-scaled on-growing operations.

--Include funding (federal or match) for Sea Grant extension personnel and relevant activities (e.g., education, outreach, transfer of technology and results) to build on past research and inform industry stakeholders.

--Involve industry stakeholder participation.

--Engagement with, and support of students through partnerships with HBCU, MSI, and HSI is encouraged.

Areas of investigation should focus on one or more early phases of aquaculture production including reproduction, hatchery, and nursery operations. Topics may include, but are not limited to:

--Improving and refining seeding and early stage cultivation methods and methods to utilize early stage organisms from the wild towards aquaculture production; reproduction/broodstock management and improvement of strategies such as early propagation, development of domesticated stocks, selective breeding and genetic

improvement; diet development/refinement; out-of-season and year-round reproduction; spawning inducement strategies; and gender and ploidy manipulation.

--Improved and refined hatchery and/or nursery protocols and strategies including early stage cultivation methods; nutrition; grading and culture density; evaluation of the use of microbial amendments such as prebiotics and probiotics; optimizing physical and biological parameters of culture systems such as light level, water flow, turbidity; automation of production operations; and improved metamorphosis/settlement.

--Health management strategies relevant to early stage propagation of aquaculture species.

C. Program Authority

Statutory authority for this program is provided under the National Sea Grant College Program Act of 1966, as amended (33 USC 1121 et seq.).

II. Award Information

A. Funding Availability

Subject to the availability of funding, this announcement describes how eligible applicants should apply for this funding opportunity entitled “Early Stage Propagation Strategies for Aquaculture Species.” Sea Grant anticipates having approximately \$4,000,000 to fund approximately 5-16 projects for up to three years in the following categories:

--Up to \$250,000 in federal funds can be requested for individual research projects that address one or more topics relevant to program priorities.

--Up to \$750,000 in federal funds can be requested for projects proposing multi-partner efforts addressing the program priorities.

There is no guarantee that funds will be available to make awards, or that any application will be selected for funding. If an applicant incurs any costs prior to receiving an award agreement signed by an authorized NOAA official, it does so at its own risk of not being selected or of these costs not being included in a subsequent award. NOAA and DOC will not be responsible for any incurred project costs if this program fails to receive full funding.

B. Project/Award Period

The anticipated start date is July 1, 2022, with projects to be completed no later than June 30, 2025.

C. Type of Funding Instrument

The funding instrument is a cooperative agreement to an eligible institution. A cooperative agreement is used when substantial involvement of the federal government during the performance of the proposed work is anticipated. The nature of the substantial involvement includes strategic engagement with the National Sea Grant Aquaculture Team, support from National Sea Grant communication efforts, and participation in National Sea Grant Aquaculture Symposia.

III. Eligibility Information

A. Eligible Applicants

The following entities are eligible to submit to this opportunity: Sea Grant College Programs, Sea Grant Institutional Programs, and Sea Grant Coherent Area Programs. A Sea Grant Program may submit or participate in more than one proposal.

Other interested entities must submit proposals in partnership with and through a relevant Sea Grant Program. Please note that it is not a requirement that investigators, including the PI, are part of a Sea Grant program, however proposals must be submitted with and through a Sea Grant program. Contact information for Sea Grant Programs can be found at: <https://seagrant.noaa.gov/About>. If you need further assistance in identifying a Program to partner with please contact one of the Sea Grant Aquaculture Managers listed below in Section VII. Agency Contacts.

Federal agencies and their personnel are not permitted to receive federal funding under this competition; however, federal scientists and other employees can serve as uncompensated partners or co-Principal Investigators on applications. Federal labs and offices can also make available specialized expertise, facilities, or equipment to applicants but cannot be compensated under this competition for their use, nor can the value of such assets be used as match.

The National Sea Grant College Program champions diversity, equity, and inclusion (DEI) by recruiting, retaining and preparing a diverse workforce, and proactively engaging and serving the diverse populations of coastal communities. Sea Grant is committed to building inclusive research, extension, communication and education programs that serve people with unique backgrounds, circumstances, needs, perspectives and ways of thinking. We encourage applicants of all ages, races, ethnicities, national origins, gender identities, sexual orientations, disabilities, cultures, religions, citizenship types, marital statuses, education levels, job classifications, veteran status types, income, and socioeconomic status types, to

apply for this opportunity.

B. Cost Sharing or Matching Requirement

Non-federal matching funds equal to at least 50 percent of the federal funding request must be provided unless a waiver justified by statute is granted, such as the waiver for insular areas granted by the Department of Commerce pursuant to 48 U.S.C. 1469a. If you believe your application may qualify for a waiver, please contact the Sea Grant Aquaculture Managers listed below in Section VII before submission to discuss it. The cumulative match at the end of each year of the grant must not fall below 50 percent of the cumulative federal request up to that point. In-kind contributions directly supporting this application may count towards this matching requirement. See the Sea Grant General Application Guide (<https://seagrants.noaa.gov/Portals/1/Guidance/SeaGrantGeneralApplicationGuide.pdf>) for more information.

C. Other Criteria that Affect Eligibility

None.

IV. Application and Submission Information

A. Address to Request Application Package

Application packages are available online and can be downloaded from www.grants.gov under opportunity NOAA-OAR-SG-NOAA-OAR-SG-2022-2007053. If an eligible applicant does not have access to the internet, please contact the Agency Contacts listed in Section VII for submission instructions.

B. Content and Form of Application

This section provides an overview of required proposal elements (and where to locate them). Applications **MUST** adhere to the provisions under "Required Elements" below. Failure to adhere to these provisions may result in a delay in award processing or rejection of the application, based on the extent of the noncompliance.

Additional guidance on Sea Grant-specific form completion can be found here: Sea Grant General Application Guide

(<https://seagrants.noaa.gov/Portals/1/Guidance/SeaGrantGeneralApplicationGuide.pdf>)

The submitting Sea Grant program must redact all Personally Identifiable Information (PII) in the application materials prior to final submission to grants.gov. PII that must be redacted from the application includes, but is not limited to, social security number, date of birth,

student identification number (from transcripts) or other information which if lost, compromised, or disclosed without authorization, could result in harm, embarrassment, inconvenience, or unfairness to an individual.

Required Elements: (Notice to Submit):

A Notice to Submit to this competition must be received via electronic mail by both the appropriate Sea Grant Program(s) and the National Sea Grant Office (oar.hq.sg.aquaculture@noaa.gov) by 5:00 pm (local time of lead Sea Grant Program) on November 16, 2021. Contact information for each Program can be found at <https://seagrant.noaa.gov/About>. If you need further assistance in identifying a Program to partner with please contact the National Sea Grant Office at the e-mail address above.

The Notice to Submit must include the following:

- Tentative Project Title
- Tentative Objectives
- Type of project (individual research project or multi-partner effort)
- Proposed Sea Grant Program(s) involved
- Potential Co-PIs and other existing or potential project partners
- Project point of contact with email
- Estimation of Federal funds requested by year.

Required Elements: (Full Proposal Application):

Full applications to this competition must be submitted to Grants.gov by 11:59 pm Eastern Time on February 3, 2022. Contact information for each Program can be found at <https://seagrant.noaa.gov/About>. If you need further assistance in identifying a Program to partner with please contact the National Sea Grant Office at the e-mail address above.

1. Project Narrative

a. Project Proposal Narrative

The project proposal narrative should clearly lay out the topical nature of the proposal, how it responds to the priorities of the competition, and how it will lay the foundation for future work. The proposal should also identify appropriate end user groups and demonstrate their involvement throughout the project. Applicants should budget travel to attend and participate in an annual National Sea Grant Aquaculture Symposium. Dates and location for the symposium will be announced annually by the National Sea Grant Office.

The project proposal narrative should be not more than 15 pages, inclusive of footnotes, tables, figures, and appendices. Reviewers will not be responsible for reviewing more than 15 pages of the project proposal narrative. Please note that the 15 page limit excludes the title page, references/literature citations, short CVs, and letters of support.

The Project Proposal Narrative must include the following elements:

- 1) Title page including the proposal title, a listing of all project investigators with email contacts, a listing of collaborators/partners, and a summary budget by year of federal funds requested with matching funds in parentheses.
- 2) Project Summary (no more than 300 words summarizing elements 3, 4, 6, and 7 below)
- 3) Introduction/background/justification
- 4) Project objectives
- 5) General work plan and milestones
- 6) How the project will advance reproduction, hatchery, and/or nursery strategies of one or more aquaculture species as defined above
- 7) Anticipated outcomes
- 8) Coordination with Sea Grant program elements (research and extension)
- 9) References and literature citations (does not count against the page limit)
- 10) Short CVs (no longer than two pages) for each principal and co-principal investigator (does not count against the page limit)
- 11) Letters of support confirming partnerships as listed in the proposal (does not count against the page limit)
- 12) Other letters of support (as relevant; if included, they do not count against the page limit)

b. Abbreviated Environmental Compliance Questionnaire (OMB Control No. 0648-0538)

A separate NEPA Questionnaire must be completed for each individual project in the application. The questionnaire can be found here:

<https://seagrant.noaa.gov/insideseagrant/Implementation>. Applicants must ensure that the questionnaire is completed in full and includes detailed information regarding project location, methodology, and permits. Copies of all permits required for project activities should be included with application materials. If a permit is pending or planned, please provide this information. Guidance on how to complete the Questionnaire and example Questionnaires for different types of projects can be found here:

<https://seagrant.noaa.gov/insideseagrant/Implementation>.

The NEPA Questionnaire is required for ALL research projects even if the project is fully

lab-based or relies on social science. The NEPA Questionnaire is also required for any project that meets the following criteria:

- Environmental permits, authorizations or waivers
- Biological take and/or release
- Environmental sampling
- Hazardous or toxic substances and waste
- Permanent or temporary environmental effects
- Endangered or threatened species and/or protected areas
- Known or unknown risks to human health or the environment
- Controversial environmental subject matter

c. Data Management Plan

For reference: https://nosc.noaa.gov/EDMC/documents/Data_Sharing_Directive_v3.0.pdf

See Section VI. B. (8)

All applications should include a data management plan. If a proposal responding to this competition will not generate environmental data, the data management plan should say, “This project will not generate environmental data, therefore a data management plan is not required.” For reference:

https://nosc.noaa.gov/EDMC/documents/Data_Sharing_Directive_v3.0.pdf

2. Budget Narrative

The budget narrative must include the following budget documents (Sea Grant 90-4 forms and budget justification). Additional budget narrative guidance can be found at: https://www.noaa.gov/sites/default/files/atoms/files/gmd_budget_narrative_guidance_-_05-24-2017_final.pdf. Applicants should budget travel to attend and participate in an annual National Sea Grant Aquaculture Symposia. Dates and location for symposia will be announced annually by the National Sea Grant Office. Each individual project included within the application must also include the following budget documents (Sea Grant 90-4 forms and budget justification narratives) in the format and order below:

a. Sea Grant 90-4 Form (OMB Control No. 0648-0362)

Sea Grant 90-4 forms are required to provide budget breakdowns and budget justifications by year and object class for the proposal. A completed Sea Grant 90-4 form should be completed for each project year, as well as a total budget for the entire project duration (i.e., Year 1, Year 2, Year 3, and Years 1-3). The Sea Grant 90-4 form can be downloaded at:

<https://seagrants.noaa.gov/insideseagrants/Implementation>. Guidance on filling out these forms is located in the Sea Grant General Application Guide.

b. Budget Justification

For each year of the project, a budget Justification is required. Each budget justification should explain the budget items in sufficient detail to enable review of the appropriateness of the funding requested. Each budget justification should be attached as a PDF to each Sea Grant 90-4 form, as appropriate. Guidance on completing the budget justifications is located in the Sea Grant General Application Guide.

3. Overall Application

In addition to the forms required above, standard Federal Forms and Assurances are required for the overall application and can be found with the application package on Grants.gov or on the Sea Grant website (links found below). These include:

a. SF424 Form (Grants.gov, OMB Control No. 4040-0004)

This form, titled “Application for Federal Assistance,” must identify the entire funding period, as well as the Federal funding amount being requested by the applicant and the non-Federal matching fund amount. The form must be completed with the institution’s accurate EIN and DUNS and Point of Contact, and signed by the institution’s authorized representative or designee.

b. SF424A Form (Grants.gov, OMB Control No. 4040-0006)

This form, titled “Budget Information - Non-Construction Programs,” must describe the entire funding period (broken out by year if multi-year) in federal and non-federal dollars, for the entire application. Fill out Section B of this SF-424A form to show the overall budget breakdown by object class by year with separate columns for each year of federal funding as well as each year of non-federal funding. If there is insufficient space, an additional SF-424A Form, Extra Section B should be used (see below).

c. Additional SF424A Form, Extra Section B

(<https://seagrants.noaa.gov/insideseagrants/Implementation>, OMB Control No. 4060-0006)

The SF424A form described above only includes space to report the applicant’s yearly federal and non-federal dollars over two years. If the application includes more than two

years of federal and non-federal dollars, please complete the Additional SF-424A, Extra Section B to report the yearly non-federal matching fund budget of the grant. Guidance on filling out the form is located in the Sea Grant General Application Guidance Document (<https://seagrants.noaa.gov/Portals/1/Guidance/SeaGrantGeneralApplicationGuide.pdf>). This form is an outlier and will be added to the “Budget Narrative Attachment” section on Grants.gov, as described in Section IV. C. 2.

d. SF-424B Assurances (Grants.gov, OMB Control No. 4040-0007)

The form, titled “Assurances – Non-Construction Programs,” must be completed and signed by the institution's authorized representative or designee.

e. CD-511 (Grants.gov, US Department of Commerce)

The form, titled “Certification Regarding Lobbying,” must be completed and signed by the institution's authorized representative or designee. In some instances, the SF-LLL Disclosure of Lobbying Activities form may also be required. See the instructions on the CD-511 for further information.

f. SF-LLL (Grants.gov, OMB Control No. 0348-0046)

The form, titled “Disclosure of Lobbying Activities,” must be completed and signed by the institution's authorized representative or designee, if appropriate.

C. Unique Entity Identifier and System for Award Management (SAM)

To enable the use of a universal identifier and to enhance the quality of information available to the public as required by the Federal Funding Accountability and Transparency Act, 31 U.S.C. 6101 note, to the extent applicable, any proposal awarded in response to this announcement will be required to use the System for Award Management (SAM), which may be accessed online at <https://www.sam.gov/SAM/>. Applicants are also required to use the Dun and Bradstreet Universal Numbering System, as identified in OMB guidance published at 2 CFR Parts 25, which may be accessed at https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title02/2cfr25_main_02.tpl.

D. Submission Dates and Times

Notices to Submit to this competition must be received via electronic mail by both the appropriate Sea Grant program(s) and the National Sea Grant Office (oar.hq.sg.aquaculture@noaa.gov) by 5:00 pm (local time of lead Sea Grant program) on Tuesday, November 16, 2021. Contact information for each program can be found at

<https://seagrants.noaa.gov/About>. If you need further assistance in identifying a program to partner with please contact the National Sea Grant Office at the e-mail address above.

Full proposal applications must be submitted to Grants.gov by 11:59 pm Eastern Time on Thursday, February 3, 2022. (Note that National Sea Grant Office staff will only be available to answer questions until 5:00 p.m. Eastern Time.). Please note: validation or rejection of an application by Grants.gov may take up to two business days after submission.

E. Intergovernmental Review

Applications under Sea Grant are not subject to Executive Order 12372, "Intergovernmental Review of Federal Programs."

F. Funding Restrictions

The Sea Grant Act at 33 USC 1124(d)(2) states: "No payment under any grant or contract under this section may be applied to:

a) the purchase or rental of any land; or

b) the purchase, rental, construction, preservation, or repair of any building, dock, or vessel; except that payment under any such grant or contract may be applied to the short-term rental of buildings or facilities for meetings which are in direct support of any Sea Grant Program or project and may, if approved by the Secretary, be applied to the purchase, rental, construction, preservation, or repair of non-self-propelled habitats, buoys, platforms, and other similar devices or structures, or to the rental of any research vessel which is used in direct support of activities under any Sea Grant program or project."

G. Other Submission Requirements

None.

Proposal applications must be submitted through Grants.gov. If an eligible applicant does not have access to the internet, please contact the Agency Contacts listed in Section VII for submission instructions.

V. Application Review Information

A. Evaluation Criteria

Specific instructions and guidance will be provided to reviewers when they are assigned proposals to review, ensuring that they adhere to the following Evaluation Criteria.

A. Evaluation Criteria

1) Importance/relevance and applicability of proposed projects to the program priorities (30 points). This criterion ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, Federal, regional, state, or local activities.

2) Technical/scientific merit (30 points). This criterion assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals, objectives, and data management considerations.

3) Overall qualifications of applicants (10 points). This criterion ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project.

4) Project costs (5 points). This criterion evaluates the budget to determine if it is realistic and commensurate with the project needs and time frame.

5) Outreach and Education (25 points). This criterion reviews whether the project provides a focused and effective education and outreach strategy regarding NOAA's mission to protect the Nation's natural resources, Sea Grant's strategic focus areas, and the goals of the individual competition announcement to target the developing US aquaculture industry. Outreach to and inclusion of underserved and underrepresented audiences as part of this competition has the potential to make an impact on not only the diversity and inclusion in science at NOAA, but also in the equity of services provided by NOAA and is encouraged.

The above criteria should lead to the selection of proposals that: 1) address development and refinement of early stage propagation strategies for the production of aquaculture species; 2) demonstrate that the work proposed will meaningfully advance the commercialization of the species being studied; and 3) demonstrate a plan to extend the results of work to industry stakeholders in the U.S.

B. Review and Selection Process

Once a full proposal application has been received by NOAA, an initial administrative review is conducted to determine compliance with requirements and completeness of the application. Applications that are missing required elements listed in Section IV. B. above, or applications coming from ineligible applicants may be rejected without further review.

Applications that pass the administrative review will be reviewed by a technical panel drawn from experts in a range of disciplines that are relevant to the applications. Each proposal will

receive at least three written reviews from the panelists assessing its merits with regard to the evaluation criteria.

The proposals, supplemented with information from the Abbreviated Environmental Compliance Questionnaire, will also be reviewed by the program manager to assess the environmental compliance of the proposed actions. The program manager, NEPA staff lead, or grants specialist may contact the applicants to discuss questions about the environmental effects, merit, or administrative correctness of the application, and may delay approval of the application, or impose conditions on the award preventing funding or execution of certain activities, until all questions are satisfactorily answered.

C. Selection Factors

The Selecting Official shall recommend awarding in the rank order unless the proposal is justified to be selected out of rank order based on one or more of the following factors:

- Availability of funding.
- Balance/distribution of funds:
 - geographically
 - by type of institution
 - by type of partners
 - by research priority
 - by project types
- Duplication of other projects funded or considered for funding by NOAA/Federal agencies.
- Program priorities and policy factors.
- Applicant's prior award performance.
- Partnerships with/Participation of targeted groups.
- Adequacy of information necessary for NOAA staff to make a NEPA determination and draft necessary documentation before recommendations for funding are made to the Grants Officer.

Consequently, awards may not necessarily be made to the highest-scored applications. Investigators may be asked to answer questions; and/or modify objectives, work plans, and/or budgets (including overall funding level) to address the issues raised by the reviewers, the competition manager, the Selecting Official, or the Grants Officer before an award is made. Subsequent administrative processing will be in accordance with current NOAA grants procedures.

D. Anticipated Announcement and Award Dates

Subject to the availability of funds, awards are expected to start July 1, 2022.

VI. Award Administration Information

A. Award Notices

Successful applicants will receive notification when the application has been recommended for funding to the NOAA Grants Management Division. This notification is not an authorization to begin performance of the project. Official notification of funding, signed by the NOAA grants officer, is the authorizing document that allows the project to begin. Notification will be issued to the authorizing official and the PI of the project either electronically or in hard copy. Unsuccessful applicants will be notified that their proposal was not selected. Anonymous copies of reviews and summaries of review panel deliberations, if any, will be made available to all applicants, regardless of whether they were selected to be funded.

B. Administrative and National Policy Requirements

1) Department of Commerce Pre-Award Notification Requirements For Grants And Cooperative Agreements - The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register notice of December 30, 2014 (79 FR 78390) are applicable to this solicitation and may be accessed online at <https://www.gpo.gov/fdsys/pkg/FR-2014-12-30/pdf/2014-30297.pdf>.

2) Uniform Administrative Requirements, Cost Principles, and Audit Requirements - Through 2 C.F.R. § 1327.101, the Department of Commerce adopted Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 C.F.R. Part 200, which apply to awards in this program. Refer to <http://go.usa.gov/SBYh> and <http://go.usa.gov/SBg4>.

3) Department of Commerce Terms and Conditions - Successful applicants who accept a NOAA award under this solicitation will be bound by Department of Commerce Financial Assistance Standard Terms and Conditions. This document will be provided in the award package in NOAA's Grants Online system at <https://grantsonline.rdc.noaa.gov/flows/home/Login/LoginController.jspf> and is also available at http://www.ago.noaa.gov/grants/external_links.html, as well as https://www.commerce.gov/sites/default/files/2020-11/DOC%20Standard%20Terms%20and%20Conditions%20-%202012%20November%202020%20PDF_0.pdf

4) Limitation of Liability - Funding for programs listed in this notice is contingent upon the availability of appropriations. Applicants are hereby given notice that funds may not have been appropriated yet for the programs listed in this notice. In no event will NOAA or the Department of Commerce be responsible for proposal preparation costs. Publication of this announcement does not oblige NOAA to award any specific project or to obligate any available funds.

5) National Environmental Policy Act (NEPA) - NOAA must analyze the potential environmental impacts, as required by the National Environmental Policy Act (NEPA), for applicant projects or proposals which are seeking NOAA Federal funding opportunities. Detailed information on NOAA compliance with NEPA can be found at the following NOAA NEPA website: <http://www.nepa.noaa.gov/>, including our NOAA Administrative Order 216-6 for NEPA, http://www.nepa.noaa.gov/NAO216_6.pdf, and the Council on Environmental Quality implementation regulations, http://energy.gov/sites/prod/files/NEPA40CFR1500_1508.pdf. Consequently, as part of an applicant's package, and under their description of their program activities, applicants are required to provide detailed information on the activities to be conducted, locations, sites, species and habitat to be affected, possible construction activities, and any environmental concerns that may exist (e.g., the use and disposal of hazardous or toxic chemicals, introduction of non-indigenous species, impacts to endangered and threatened species, aquaculture projects, and impacts to coral reef systems). In addition to providing specific information that will serve as the basis for any required impact analyses, applicants may also be requested to assist NOAA in drafting an environmental assessment, if NOAA determines an assessment is required. Applicants will also be required to cooperate with NOAA in identifying feasible measures to reduce or avoid any identified adverse environmental impacts of their proposal. Failure to do so shall be grounds for not selecting an application. In some cases if additional information is required after an application is selected, funds can be withheld by the Grants Officer under a special award condition requiring the recipient to submit additional environmental compliance information sufficient to enable NOAA to make an assessment on any impacts that a project may have on the environment.

6) Review of Risk - After applications are proposed for funding by the selecting official, the Grants Office will perform administrative reviews, including an assessment of risk posed by the applicant under 2 C.F.R. 200.206. These may include assessments of the financial stability of an applicant and the quality of the applicant's management systems, history of performance, and the applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-Federal entities. Special conditions that address any risks determined to exist may be applied. Applicants may submit comments to the Federal Awardee Performance and Integrity Information System (FAPIIS) about any information

included in the system about their organization for consideration by the awarding agency.

7) Data Sharing Plan ---1. Environmental data and information collected or created under NOAA grants or cooperative agreements must be made discoverable by and accessible to the general public, in a timely fashion (typically within two years), free of charge or at no more than the cost of reproduction, unless an exemption is granted by the NOAA program. Data should be available in at least one machine-readable format, preferably a widely-used or open-standard format, and should also be accompanied by machine-readable documentation (metadata), preferably based on widely used or international standards. 2. Proposals submitted in response to this Announcement must include a data management plan of up to two pages describing how these requirements will be satisfied. The data management plan should be aligned with the data management guidance provided by NOAA in the announcement. The contents of the data management plan (or absence thereof), and past performance regarding such plans, will be considered as part of proposal review. A typical plan should include descriptions of the types of environmental data and information expected to be created during the course of the project; the tentative date by which data will be shared; the standards to be used for data/metadata format and content; methods for providing data access; approximate total volume of data to be collected; and prior experience in making such data accessible. The costs of data preparation, accessibility, or archiving may be included in the proposal budget unless otherwise stated in the guidance. Accepted submission of data to the NOAA National Centers for Environmental Information (NCEI) is one way to satisfy data sharing requirements; however, NCEI is not obligated to accept all submissions and may charge a fee, particularly for large or unusual datasets. 3. NOAA may, at its own discretion, make publicly visible the data management plan from funded proposals, or use information from the data management plan to produce a formal metadata record and include that metadata in a catalog to indicate the pending availability of new data. 4. Proposal submitters are hereby advised that the final pre-publication manuscripts of scholarly articles produced entirely or primarily with NOAA funding will be required to be submitted to NOAA Institutional Repository after acceptance, and no later than upon publication. Such manuscripts shall be made publicly available by NOAA one year after publication by the journal.

8) Indirect Cost Rate - If an applicant does not have a current indirect cost rate with a federal agency they may choose to negotiate a rate with the Department of Commerce or use the de minimis indirect cost rate of 10% of Modified Total Direct Cost (MTDC) (as allowable under 2 C.F.R. §200.414). The negotiation and approval of a rate is subject to the procedures required by NOAA and the Department of Commerce Standard Terms and Conditions. Do not include participant support costs when determining the indirect cost base. Additionally, applicants should be aware that most indirect cost rate agreements require that participant

support costs be excluded from the MTDC base when calculating indirect costs. Applicants should reference their official agreements. The NOAA contact for indirect or facilities and administrative costs is: Lamar Revis, Grants Officer, NOAA Grants Management Division, Lamar.Revis@noaa.gov.

9) Minority Serving Institutions - The Department of Commerce National Oceanic and Atmospheric Administration (DOC NOAA) is strongly committed to increasing the participation of Minority Serving Institutions (MSIs), i.e., Historically Black Colleges and Universities, Hispanic-serving institutions, Tribal colleges and universities, Alaskan Native and Native Hawaiian institutions, and institutions that work in underserved communities.

10) Freedom of Information Act (FOIA) - In the event that an application contains information or data that you do not want disclosed prior to award for purposes other than the evaluation of the Application, mark each page containing such information or data with the words "Privileged, Confidential, Commercial, or Financial Information - Limited Use" at the top of the page to assist NOAA in making disclosure determinations. DOC regulations implementing the Freedom of Information Act (FOIA), 5 U.S.C 552, are found at 15 C.F.R. Part 4, which sets forth rules for DOC to make requested materials, information, and records publicly available under FOIA. The contents of funded applications may be subject to requests for release under the FOIA. Based on the information provided by the applicant, the confidentiality of the content of funded applications will be maintained to the maximum extent permitted by law.

11) NOAA Sexual Assault and Sexual Harassment Prevention and Response Policy - If NOAA-operated, leased, or owned facilities are involved in any awards funded under this announcement, such awards are subject to the NOAA Sexual Assault and Sexual Harassment Prevention and Response Policy Applicable to Financial Assistance Awards Involving NOAA-Operated Facilities (May 2018) found at:

<https://www.noaa.gov/sites/default/files/legacy/document/2020/Mar/1330-52.222-70%20NOAA%20Sexual%20Assault%20and%20Sexual%20Harassment%20Prevention%20and%20Response%20Policy%20%28except%20for%20services%20for%20the%20use%20of%20a%20vessel%29%20%281%29.pdf>.

Note: To access this link, please copy and paste into your browser.

C. Reporting

The Federal Funding Accountability and Transparency Act (31 U.S.C. 6101 note) includes a requirement for awardees of applicable federal grants to report information about first-tier subawards and executive compensation under federal assistance awards. All awardees of applicable grants and cooperative agreements are required to report to the

Federal Sub-award Reporting System (FSRS) available at <https://www.fsrs.gov/> on all sub-awards over \$30,000. Refer to 2 CFR Part 170.

VII. Agency Contacts

For questions about this competition, please contact Chuck Weirich or Mark Rath, National Sea Grant Office's aquaculture managers (oar.hq.sg.aquaculture@noaa.gov).

VIII. Other Information

Potential applicants are encouraged to check Sea Grant's national website at <https://seagrant.noaa.gov/Funding> for information about a webinar and FAQs related to this announcement.

Once the applicants have been selected, programs will need to provide the information requested in the Sea Grant 90-2 into the PIER project database. Once the project is approved and funded, that information will be publicly available and searchable on the National Sea Grant College Program public website (<http://seagrant.noaa.gov>).

Recipients are required to use the National Sea Grant Planning Implementation and Evaluation Reporting (PIER) project database to communicate with the National Sea Grant Office on activities relating to this award. This includes tracking progress and impacts, in addition to performance metrics.

The grant application and final report of all funded grants are public documents, except for privileged information or material that is personal, proprietary or otherwise exempt from disclosure under law. Appropriate labeling in the application will aid identification of what may be specifically exempt. The applicant acknowledges and understands that information and data contained in applications for financial assistance, as well as information and data contained in financial, performance and other reports submitted by applicants, may be used by the Department of Commerce in conducting reviews and evaluations of its financial assistance programs. For this purpose, applicant information and data may be accessed, reviewed and evaluated by Department of Commerce employees, other federal employees, and also by federal agents and contractors, and/or by non-federal personnel, all of whom enter into appropriate conflict of interest and confidentiality agreements covering the use of such information. As may be provided in the terms and conditions of a specific financial assistance award, applicants are expected to support program reviews and evaluations by submitting required financial and performance information and data in an accurate and timely manner, and by cooperating with Department of Commerce and external program

evaluators. In accordance with 2 C.F.R. § 200.303(e), applicants are reminded that they must take reasonable measures to safeguard protected personally identifiable information and other confidential or sensitive personal or business information created or obtained in connection with a Department of Commerce financial assistance award.

In addition, Department of Commerce regulations implementing the Freedom of Information Act (FOIA), 5 U.S.C. Sec. 552, are found at 15 C.F.R. Part 4, Public Information. These regulations set forth rules for the department regarding making requested materials, information, and records publicly available under the FOIA. Applications submitted in response to this Notice of Funding Opportunity may be subject to requests for release under the Act. In the event that an application contains information or data that the applicant deems to be confidential commercial information that should be exempt from disclosure under FOIA, that information should be identified, bracketed, and marked as Privileged, Confidential, Commercial or Financial Information. In accordance with 15 CFR § 4.9, the Department of Commerce will protect from disclosure confidential business information contained in financial assistance applications and other documentation provided by applicants to the extent permitted by law.

There is no guarantee that funds will be available to make awards for this federal funding opportunity or that any proposal will be selected for funding. If an applicant incurs any costs prior to receiving an award agreement signed by an authorized NOAA official, they do so at their own risk of these costs not being included in a subsequent award. NOAA or the Department of Commerce are not responsible for any direct costs of proposal preparation. Recipients and sub-recipients are subject to all federal laws and agency policies, regulations, and procedures applicable to federal financial assistance awards.