

Woods Hole Oceanographic Institution Sea Grant Biennial Request for Proposals

Contact:

seagrant-research@whoi.edu

Funding cycle:

February 1, 2024–January 31, 2026

Pre-proposals must be received by:

4:30 pm Eastern Time, Wednesday, January 25, 2023

Pre-proposal instructions can be found on page 9

Full proposals must be received by:

4:30 pm Eastern Time, Friday, April 28, 2023

Full proposal instructions can be found on page 10

Other important dates and deadlines:

General informational webinars:

- November 30, 2022 at 2:00pm EST. Webinar will be held via Zoom. [Click here to register.](#)
- December 14, 2022 at 2:00pm EST. Webinar will be held via Zoom. [Click here to register.](#)

No later than early-March 2023: Principal Investigators receive recommendations regarding development of full proposals.

Early September 2023: Applicants informed of decisions.

February 1, 2024: Anticipated start date for 2024-2025 research projects.

Introduction

Woods Hole Oceanographic Institution Sea Grant (WHOI Sea Grant) requests proposals for two-year projects from investigators at academic, research and educational institutions throughout the Commonwealth of Massachusetts. Funded projects will fill information gaps or provide innovative solutions to pressing coastal issues in Massachusetts. Proposals should be designed to help address important local management problems and must include a plan for how audiences beyond the academic research community can use anticipated results.

Anticipated funding

Depending on availability of funds, WHOI Sea Grant expects to award approximately \$1,000,000 to support 4-6 research projects during the two-year funding period. Each application can request a maximum of \$250,000 in federal funds. Non-federal matching funds of at least 50% are required (for example, a project receiving \$200,000 in WHOI Sea Grant federal funds must include at least \$100,000 in matching funds for a total project budget of \$300,000).

Eligibility

Lead Principal Investigators for proposed projects must be staff or faculty at any public or private research or higher educational institution within the Commonwealth of Massachusetts.

WHOI Sea Grant encourages PIs to build MA-based teams, although this is not a requirement and if necessary, co-PIs outside of Massachusetts may be funded through sub-awards from the lead PI's institution. The location of team members is not part of the proposal evaluation criteria. Researchers are eligible to submit only one pre-proposal as lead PI, but may serve as a co-PI on other proposals. Investigators that do not submit a pre-proposal are not eligible to submit a full proposal. Proposed research must occur primarily within Massachusetts and/or Massachusetts state waters and adjacent federal waters.

Program and Focus Area Priorities

Woods Hole Oceanographic Institution (WHOI) Sea Grant's mission is to enhance the practical use and conservation of coastal and marine resources by developing and sharing science-based knowledge to create a sustainable economy and environment for the diverse communities of Massachusetts. WHOI Sea Grant is part of the National Sea Grant College Program of the National Oceanic and Atmospheric Administration, a network of 34 individual programs located in each of the coastal and Great Lakes states.

For the 2024-2025 research competition, WHOI Sea Grant solicits proposals that directly address one or more of the focus areas and program goals described in [WHOI Sea Grant's 2024-2027 Strategic Plan](#). Specifically, WHOI Sea Grant seeks proposals focusing on the research theme areas *Healthy Coastal Ecosystems*, *Sustainable Fisheries and Aquaculture*, and/or *Resilient Communities and Economies*. Priority research topics associated with management challenges faced by Massachusetts communities are listed in bullet form under each of the focus areas, although research projects on other emerging themes that fit the focus areas are also welcome. In addition, advancing Diversity, Equity, Inclusion, Justice, and Accessibility (DEIJA) in the marine sciences, climate change impacts on coastal ecosystems and landforms, and environmental literacy and workforce development are considered as cross cutting themes. Previously funded research projects can be located [here](#).

Cross-cutting Themes

Diversity, Equity, Inclusion, Justice, and Accessibility – 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. The program encourages 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, and socioeconomic status types to apply for this competitive research opportunity.

Further, the WHOI Sea Grant program encourages applicants to recruit and engage with students and fellows from underrepresented racial and ethnic groups, individuals with disabilities and individuals from economically or educationally disadvantaged backgrounds that may have inhibited their ability to pursue a career in STEM. Applicants should articulate how their research will have broader societal impacts on the coastal community including interested parties from underrepresented or underserved communities. DEIJA activities will be considered in the evaluation of proposals – see evaluation criteria below.

Climate Change – Adapting to and mitigating environmental changes associated with climate change will be one of the largest challenges facing coastal communities over the coming decades. To this end, climate change related issues are recognized to cross all focus areas and research

priorities identified below. WHOI Sea Grant encourages applicants to consider climate change drivers when proposing projects that address any of the research priorities outlined below.

Environmental Literacy and Workforce Development – Our program supports the need to build a diverse workforce that is literate in science, technology, engineering and mathematics in order to meet the global challenges of the 21st century. This need is directed at not only the next generation of scientists and engineers, but also those who will develop new approaches to managing resources, and the general public who will make decisions. WHOI Sea Grant encourages applicants to consider addressing this important need through support/training of undergraduate and graduate students and/or the engagement plan developed as part of your research proposal.

Primary Focus Areas

Healthy Coastal Ecosystems – Issues related to the health of ecosystems along the coast of Massachusetts and in the Northeastern U.S. are similar to those observed in other areas of the U.S. coastline. Areas of concern include but are not limited to: declines in water quality, loss of habitat, invasive species, and increasing pressure on coastal resources. For WHOI Sea Grant’s 2024-2025 cycle, research priorities in this focus area include:

- Interactions between climate change, coastal water quality, and ecosystem response to eutrophication
- Range shifts/expansions of marine flora and fauna
- Identifying mechanisms or technologies to facilitate or incentivize ecosystem conservation and restoration

Sustainable Fisheries and Aquaculture – Fisheries, aquaculture, and marine and freshwater resources provide food, jobs, and economic and cultural values. Natural resources must be sustained to support fishing communities and industries, including commercial, recreational, and subsistence fisheries, and aquaculture. The revitalization of our nation’s fisheries and sustainable aquaculture are priority areas that fit within the capacity of the academic and research environment for the region served by our program. Priority research areas include:

- Diversifying and expanding aquaculture and fisheries opportunities
- Technology development that fosters expansion of sustainable aquaculture practices while reducing interactions with wildlife.
- Resiliency of commercial or recreational fisheries and/or aquaculture to: 1) changes in market conditions; and/or 2) stressors such as climate change, water quality, or fishing effort

Resilient Communities and Economies – Seventy-five percent of the population of Massachusetts lives in coastal counties. Coastal ponds, embayments, open coasts, and marine resources are impacted by commercial, industrial, recreational and residential activities. Threats to coastal communities include climate change driven sea-level rise, shoreline erosion, and coastal flooding. Priority research areas include:

- Exploring economic feasibility and/or social acceptance of adaptation methods to coastal hazards
- Coastal wetlands: factors affecting their resilience, ecosystem service valuation, and/or facilitating adaptation to climate change related impacts
- Green infrastructure as a strategy to protect shorelines and reduce coastal erosion

Engagement Plan

In addition to having a strong scientific justification for the proposed research activities, projects should seek to help address an important local management problem within the Commonwealth of Massachusetts. Proposals must include a plan for disseminating findings and/or products to relevant interested parties, or involving them directly in the research endeavor. Interested parties are those who are the beneficiaries of your research results, and might include K-12 students, parents and/or teachers, coastal managers, members of coastal industries or business owners, or the general public, among others. A research project's potential application by interested parties in Massachusetts is an important consideration in advancing WHOI Sea Grant's mission.

PIs are encouraged to work with WHOI Sea Grant's outreach, communications and education staff for help in identifying and contacting communities, individuals and organizations that will benefit from project outcomes. Elements of engagement plans could also seek to address strategic plan goals within WHOI Sea Grant's Environmental Literacy and Workforce Development focus area.

Examples of engagement activities could include:

- Partnering with a state agency or industry that will be an end user of the research.
- Presenting the findings of your research to relevant industry or management organizations.
- Contribute to and/or lead teacher professional development workshops highlighting the findings of your work.
- Developing an engaging written or digital product that helps translate your findings for interested parties.
- Developing decision-support tools to help the management community use the findings of your research.
- Development of MA-standards-based K-12 curricula around the findings of your work
- Inclusion of high school students in the research process, including those from underserved communities or populations.
- Engaging community members in the research aspects of your project.
- Designing an interactive exhibit based on your work for use at a science or visitor's center.

While WHOI Sea Grant staff may work with members of a project team, salary costs associated with their participation should not be included in project budgets. Funded investigators will be paired with a member of our outreach staff and will be encouraged to maintain an informal line of communication with the staff member during the course of the study period. Frequently asked questions regarding development of a strong engagement plan can be found [here](#).

Applicant Demographics Questionnaire

After submission of full proposals, all PIs and co-PIs will be asked to fill out a questionnaire in order to help us assess the demographics of applicants to this research competition. Any PI responses will be anonymous with no linkage to their proposal submission. A response to the questionnaire is voluntary and will play no role in the funding decision-making process. Any responses received will be shared with the National Sea Grant Office.

Expectations and Reporting Requirements

NOAA requires Sea Grant programs to report the impacts, accomplishments and metrics of each proposal it funds, and sets strict deadlines and formats for these reports as part of its robust and integrated Planning, Implementation and Evaluation System. These products include annual reports and performance measures that are used to review the program and ensure it is meeting the expectations as set forth by Congress.

Programs are evaluated in three general areas: 1) on their approach to management; 2) on the scope and success of their engagement with interested parties; and, 3) on the impact their program has on society from both an environmental and a socio-economic perspective. In other words, program viability and future funding is based on highlighting the positive impacts funded research is having on the people of Massachusetts and the nation.

As a result, funded researchers are expected to:

- Participate in virtual kickoff and mid-cycle meetings with the Sea Grant staff, as well as an in-person symposium at the conclusion of the 2-year project. Please include in year 2 of your budget funding for a 1-day in-person trip to Woods Hole for participation in the symposium.
- Assist Sea Grant communications staff with newsletter articles or press releases related to the funded research, or any other communications products.
- Update your WHOI Sea Grant staff liaison every 6 months throughout your project on project engagement and outreach efforts.
- Submit annual progress reports while the project is underway and a final report when completed, by April 30 of each year.
- Publish the results of their research in peer-reviewed journals. Provide the program with pre-publication copies of any manuscript or product intended for public dissemination produced as part of, or as a result of, the project.
- Review WHOI Sea Grant's supplemental terms and conditions for awards and abide by the Investigator Conduct Expectations (Appendix A).

Proposal Review and Selection Process

This proposal solicitation and review process is in compliance with the guidance set forth by the National Sea Grant Office. Proposal reviewers and panelists are free of conflict of interest, based on NSF-style standards for Conflict of Interest with respect to recent co- authorship, collaboration, and other professional relationships.

Pre-proposals

Pre-proposals are reviewed by WHOI Sea Grant staff, members of WHOI Sea Grant's advisory board, and other external panelists as needed depending on the breadth of proposals received.

Pre-proposals are evaluated using the following review criteria:

1. Relevance to research themes, priority research areas, and strategic plan goals (50%)
2. Technical merit and project feasibility (25%)
3. Strength of engagement plan (25%)

The reviewers are convened as a panel, at which time each pre-proposal is discussed by the group and ranked. Based on the panel rankings following the review criteria above and selection criteria outlined below, PIs are encouraged or discouraged to submit a full proposal, noting that all PIs who submitted a pre-proposal are eligible to submit a full proposal. However, PIs of discouraged pre-proposals that decide to submit a full proposal should be aware that their chance of funding success is low given the typical volume of proposals received and funding available.

Full-proposals

Full proposals are reviewed through a two-step process. For each proposal, at least 3 technical reviews are solicited from subject matter experts located typically outside the Commonwealth of Massachusetts or even beyond the U.S. to minimize the likelihood of conflicts of interest. A review panel of experts is then convened to evaluate the proposals, interpret the technical reviews, and make determinations on whether proposals are fundable. The NOAA Sea Grant federal program officer for WHOI Sea Grant sits on the panel as an observer.

Proposals are evaluated by both technical reviewers and the review panel using the following criteria:

Rationale and innovativeness (20%) – This criterion assesses whether there is intrinsic value in the proposed work. For this criterion, applicants will be evaluated based on the following:

- Is the problem to be addressed a valid and significant one?
- Do the researchers demonstrate adequate awareness of significant present or previous work? Does their study logically relate to it?
- Is the proposed activity innovative and/or does it use state-of-the-art methods to address important resource issues?

Scientific merit, project objectives, methods and feasibility (30%) - This criterion assesses whether the approach is technically sound, if the methods are appropriate, whether there are clear project

goals and objectives, and data management considerations. For this criterion, applicants will be evaluated based on the following:

- Are the project's objectives clear and attainable?
- Is the technical approach, scientific design, and proposed methodology adequate to test hypotheses and accomplish the stated objectives?
- Is there an element of risk in the project? If so, what are the chances of success?
- Is the proposed time frame appropriate to complete the project? Are appropriate levels of program resources (FTEs and budget) dedicated to achieve expected impacts? Is the budget reasonable?
- Is the data management plan adequate?

Qualifications and/or Promise of the research team and results from prior work funded by WHOI Sea Grant (10%) - This criterion assesses whether the applicant and partners possess the necessary education, experience, training, facilities, and administrative resources to accomplish the proposed activities. This criterion also evaluates whether researchers previously funded by WHOI Sea Grant were successful in accomplishing their prior projects. For this criterion, applicants will be evaluated based on the following:

- Is the research team qualified to conduct the research? For early-career researchers who may not have significant publication histories, do they have the appropriate technical background or support needed to successfully implement the project?
- If any member(s) of the research team has received funding in the past from WHOI Sea Grant, was the work of high quality? Were products and/or publications developed as part of their work?

Relevance to the Sea Grant Focus Areas, priority research areas, and strategic plan goals (10%) – This criterion evaluates whether the applicants are proposing research that is directly relevant to WHOI Sea Grant's RFP and strategic plan priorities. For this criterion, applicants will be evaluated based on the following:

- Does the project address and have an impact on problems outlined in the [RFP](#)?
- Does the proposed project help to further achieve the goals and objectives outlined in WHOI Sea Grant's [2024-2027 strategic plan](#)?

Potential impact to interested parties in Massachusetts, and strength of engagement plan (30%) - This criterion assesses whether the project effectively engages local communities in a few ways. In particular, this criterion assesses whether the project provides a focused, effective, and equitable education and outreach strategy regarding WHOI Sea Grant's mission to address challenges faced by interested parties in Massachusetts and Sea Grant's strategic focus areas. This criterion also assesses how well the project engages underserved communities in addressing coastal issues. For this criterion, applicants will be evaluated based on the following:

- Does the researcher(s) identify and justify potential needs and applications by end-users?
- Have end-users or potential end-users of the results – including those from underrepresented or underserved communities – of the proposed activity been identified or brought into the planning of the activity (e.g. collaborative research)? Will potential end-users be brought into the execution of the project, or will they be kept apprised of progress and results?

- Is there an appropriate type and level of collaboration with other agencies and organizations, such as management or regulatory agencies or industry?
- Have the researchers identified pathways for the proposed work to make its way into practical use or application in resources management, and/or be brought forth to general public or target audiences, to improve understanding of, and capacity for addressing pertinent coastal marine issues?
- Will the research results have broader societal impacts on the target coastal community?
- Have researchers identified ways to engage with interested parties from underrepresented or underserved communities?

Selection Criteria

For both pre- and full proposals, the review panels will provide a proposal ranking order. The director and research coordinator, who may also consult other relevant WHOI Sea Grant staff, will make the final recommendations based on the proposal rankings, unless proposals are recommended for funding outside of rank order based on the following selection factors:

- 1) Availability of funding
- 2) Strategic priority
- 3) Diversity of institutions, geography, research topics, career stage, and end user groups
- 4) Duplicates or similarities of projects funded previously by WHOI Sea Grant or other agencies
- 5) Prior award performance including adherence to the Expectations and Reporting requirements outlined in past RFPs and publication of research findings and data

Consequently, awards may not necessarily be made to the highest-ranked applications. Investigators may be asked to answer questions; and/or remove or reduce objectives, work plans, and/or budgets (including overall funding level) to address the issues raised by the reviewers or WHOI Sea Grant before an award recommendation is made. Final recommendations are submitted to the National Sea Grant Office for approval.

Pre-Proposal Preparation Instructions

Pre-proposals that do not follow the guidelines below may be returned to the PI without further consideration by the program.

Guidelines:

Summarize in 2 pages your research idea and include:

- 1) Project Title
- 2) P.I.(s), Department, Institution, Mailing Address, E-mail
- 3) Rationale for Project including Innovativeness
- 4) Project Description and Methods
- 5) Alignment with WHOI Sea Grant Focus Areas and Strategic Plan
- 6) Engagement Plan and primary interested parties
- 7) Budget – Federal Request and Cost Share for years one and two of the project
- 8) Please provide your institutional DUNS and UEI numbers and indicate if your institution has received federal funding during the past 5 years.

Although an itemized and detailed budget does not need to be submitted with the pre-proposal, the budget for the federal request and cost share should be approved by the home university or institution. Sea Grant proposals require a match of \$1 of non-federal funds for every \$2 of federal funds requested.

Formatting:

Single space, Times New Roman, no smaller than 11-point font, and right margin should not be justified. Each page should have 1-inch margins all around. Do not include a cover page. Your entire pre-proposal, including references, must be no longer than **two pages**.

Submission:

Send pre-proposals in pdf format no later than 4:30 pm Eastern Time, Wednesday, January 25, 2023 to seagrant-research@whoi.edu. Questions should be directed to Jennie Rheuban via seagrant-research@whoi.edu. WHOI Sea Grant's 2024-2027 strategic plan can be found [here](#).

Full Proposal Preparation Instructions

No documentation other than those listed below will be included in the proposal review. Proposals that do not adhere to the guidelines below may be returned to the PI without further consideration by the program.

Submission:

Please send full proposals in pdf format no later than 4:30 pm Eastern Time, Friday, April 28, 2023 to seagrant-research@whoi.edu. All documents should be submitted as a single pdf except for the 90-4 Excel budget form and the list of suggested reviewers (please see below for details). Questions should be directed to Jennie Rheuban via seagrant-research@whoi.edu.

Proposal Checklist:

To be submitted as a single pdf in the following order:

1. **Project Summary (1 page maximum)**
2. **Proposal Narrative (10 pages maximum)**
3. **Other Required Documents:**
 - References
 - Current and Pending per PI
 - CV(s) for PI(s) (2 pg. maximum)
 - Letters of Collaboration (if applicable)
4. **Data Management Plan**
5. **Abbreviated Environmental Compliance Questionnaire**
6. **Multi-year 90-4 Budget Form-Excel (also required for each subaward budget included in proposal)**
7. **Budget Justification (also required for each subaward budget included in proposal)**
8. **Negotiated Indirect Cost Rate Agreement (if applicable, also required for each subawardee including indirect costs in the budget)**
9. **Cost Share documentation with approved signatures (see sample in Appendix B)**
10. **Institutional approval**

WHOI PIs: Proposal submission must be approved by Dept. Chair, Dept. Admin., and PI in the WHOI Grants Portal (*NOTE: WHOI PIs and Department Administrators should refer to the last page of this handout for additional guidance in preparing and submitting the required forms with budgets generated by the WHOI Grants system.*)

Non-WHOI PIs: Proposal submission must be signed off by University or appropriate administrative unit in letter with a clear statement of work (SOW): a 3-4 paragraph SOW describing the specific tasks the PI will perform to meet the project objectives.

Please also submit your multi-year 90-4 Budget Form as a separate excel sheet - also required for each subcontract budget included in proposal (*We are asking for this as a separate attachment in addition to the pdf for editing purposes only*)

List of Suggested Reviewers – A list of 3 potential peer reviewers should accompany your proposal submission *as a separate document*. This list must include complete name, title, affiliation, and e-mail for each reviewer. Each reviewer is required to sign a statement certifying

the absence of conflict of interest, so please choose accordingly and be aware of standards for Conflict of Interest with respect to recent co- authorship, collaboration, and other professional relationships. Suggested reviewers should be located outside the Commonwealth of Massachusetts.

Details on proposal elements

Proposals should be single spaced, Times New Roman, no smaller than 11 point font, and right margin should not be justified. Each page should have 1-inch margins all around. Figure and table captions should also have font that is no smaller than size 11. No minimum number of pages is set for the narrative section of the proposal, but it should not exceed 10 pages. This maximum length includes tables and graphics but excludes references, current and pending, cost share letters, letters of collaboration, data management plans, abbreviated environmental compliance questionnaire, CVs, subcontract budgets and budget justifications. Number all pages of the narrative with page number at the bottom center of each page.

1. Project Cover Page and Abstract (1 page maximum)

The project cover page and abstract should include the title, a list of PIs and co-PIs with affiliations, email and phone number for each PI and co-PI, and a brief 1-2 paragraph summary of your project. This summary should include a brief description of your proposed project's objectives, methodology, and rationale.

2. Proposal Narrative (10 page limit)

Project Background (included in 10 page limit) – Describe the background for the proposal. Evaluate existing knowledge, and demonstrate how related work, past and present, supports this proposal. Avoid relying solely on technical terminology; for instance, supplement scientific names with common names. Refer to supporting information with appropriate citations.

Project Objectives (included in 10 page limit) – State the overall purpose of the proposal: What is the question or hypothesis you plan to address or the outcome(s) you seek to achieve? Show clearly how the goals of the project are related to the needs described earlier. Be concrete and specific. Then list your project objectives.

Approach and Methodology (included in 10 page limit) – Describe the overall approach to be taken to address the opportunity or problem identified. Discuss in detail the experimental design and the procedures that will be used to achieve the specific aims of the project. Identify specific tasks and describe the methods necessary to accomplish each task. Include the means by which the data will be analyzed and interpreted.

Anticipated Outcomes and Results (included in 10 page limit) - Describe the expected outcomes and results that will support, advance, or achieve the program goals identified in WHOI Sea Grant's [2024-2027 strategic plan](#) and the priority areas listed in the **Program and Focus Area Priorities** section of this RFP.

Engagement Plan (included in 10 page limit) – Describe your approach for engaging with and

disseminating findings and/or products to relevant interested parties outside of the scientific community and how they will serve to advance the WHOI Sea Grant mission to improve the translation of scientific information into knowledge for use. Include letters of collaboration and budget for associated engagement plan costs where applicable.

- Justify the need for the proposed project and its activities from the perspective of relevant interested parties (beneficiaries). Who are the beneficiaries of your project? Be as specific as possible and indicate whether you and these beneficiaries have been in communication to develop the project ideas and objectives.
- Describe the steps you will take to coordinate the project with project team members, interested parties, and WHOI Sea Grant as well as the frequency of interactions. State what you feel are the potential benefits accruing to individuals, organizations, or society in general from the application of the project's results.
- Indicate the ways in which the project's results may be applied or disseminated and describe how the results of your project will be used by others. What effects or changes might be expected? When might these impacts or outcomes be expected? Estimate the time frame in which the results would make a difference to project beneficiaries.
- In table form, include a *List of Collaborators* including key interested parties arranged by category. If a collaborator is also a beneficiary of the research, please indicate this with an asterisk.

1. U.S. universities and colleges
2. Foreign universities
3. Associations
4. Councils
5. Private industries or NGOs
6. Government
 - a. Local agencies
 - b. Massachusetts state agencies and commissions
 - c. Other state agencies
 - d. Federal agencies

Project Timeline (included in 10 page limit) - Identify the major benchmarks or milestones for the project and estimate the dates of initiation and completion of each benchmark.

Results from prior WHOI Sea Grant funding (included in 10 page limit) - If you have received funding from WHOI Sea Grant during the past 10 years, please provide: 1) the title of your prior project, 2) a short summary of your project, and 3) any publications stemming from your award. Reviewers will be asked to consider your previous work as part of their review process.

3. Other Required Documents (not included in 10 page limit)

The following proposal components should also be included in your proposal:

- References/Bibliography
- Current and Pending Support (for each P.I.)
- C.V. (for each P.I. – 2-page NSF style)
- NSF style Letters of Collaboration (if applicable)

Letters of Collaboration

Letters of collaboration should follow guidelines similar to those set forth by the National Science Foundation (NSF). As described by NSF: “A letter of collaboration documents a collaboration between a principle investigator (PI) and other entities whose contributions are significant to a proposal.” There are two types of collaborations:

A ***funded*** collaboration is one where a collaborative activity is identified in the proposal budget. In this case, a letter of collaboration is not necessary.

An ***unfunded*** collaboration is “any substantial collaboration with individuals not included in the budget.” All individuals or organizations who have been identified in the proposal and anticipate participating in the project if it is funded by WHOI Sea Grant should document their commitment to their activities as stated in the proposal via a letter of collaboration. These contributions must be documented in separate letters of collaboration from each collaborator. Each letter should contain only the statement of collaboration described below – letters that include additional information will be omitted from the proposal. *General letters of support for the project from interested parties without any formal collaboration may cause your proposal to be returned without further review.*

The letter of collaboration should include the following text:

“If the proposal submitted by *[insert the full name of the Principal Investigator]* entitled *[insert the proposal title]* is selected for funding by WHOI Sea Grant, it is my intent to collaborate and/or commit resources as detailed in the Project Narrative section of the proposal.”

4. Data Management Plan (not included in 10 page limit)

Data and information collected and/or created under NOAA grants and cooperative agreements must be made visible, accessible, and independently understandable to general users, free of charge or at minimal cost, in a timely manner (typically no later than two years after the data are collected or created), except where limited by law, regulation, policy or by security requirements. The requirement has two basic parts: (1) environmental data generated by a grant project must be made available after a reasonable period of exclusive use, and (2) the grant application must describe the plan to make the data available (Principal Investigators are expected to execute the plan). If your project produces environmental data, it must conform to NOAA’s Data Sharing Directive for Grants, Cooperative Agreements, and Contracts. For detailed guidance, please view the current version of the policy, including a definition of environmental data (which can include socioeconomic and model data), download any updates and access additional implementation resources at the following permanent URL:

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

Proposals submitted in response to this Announcement must include a Data Management Plan describing how these requirements will be satisfied. To comply with this requirement, the Principal Investigator must use the form below (Appendix C) to explain how the data and metadata will be provided. Please complete the form, including information for all applicable datasets related to

your project(s). If funding is required for data curation and archiving, please make sure that funds are budgeted in the project proposal for data management. All data generated through Sea Grant funded projects are required to be completely QA/QC'ed (Quality Assurance and Quality Control) and made publicly accessible **within two years after the end date of the project**. If the proposed research will not generate environmental data, then a Data Management Plan will need to be stated as such: "This project will not generate any environmental data." (See further instructions in Appendix C).

5. Abbreviated Environmental Compliance Questionnaire (not included in 10 page limit)

An Abbreviated Environmental Compliance Questionnaire must be completed for each proposal. This questionnaire is used to determine if your project is compliant with the National Environmental Policy Act (NEPA). All aspects of your project will undergo a review by the National Sea Grant Office through a NEPA compliance assessment to determine compliance with other federal environmental laws such as the Endangered Species Act, the Magnuson-Stevens Fisheries Management Act, and the Marine Mammal Protection Act, among others. Examples of activities that must be detailed include, but are not limited to:

- Biological take and/or release
- Environmental sampling
- Production of hazardous or toxic substances and waste
- Permanent or temporary environmental effects
- Research in areas where endangered or threatened species may be found and/or protected areas
- Research on endangered or protected species
- Research involving known or unknown risks to human health or the environment

The questionnaire should be filled out thoroughly and with sufficient detail so that our Federal Program Officer can accurately assess environmental compliance. If information is not provided in enough detail, NOAA, via our Federal Program Officer, may need to request additional information, which can delay the approval process of our Omnibus Application, your potential funding, and project activities. You will need to provide copies of all federal, state, or local permits, including institutional review board (IRB) approvals. If you do not have the appropriate permits for your project, please indicate in the questionnaire if you will need permits and your plan for obtaining them. You **must** have an understanding of the timeline for receiving approved federal, state, and local permits for your research as, depending on the topic, location, or potential environmental impact of your project, NEPA reviews can be extensive and may take up to a year to complete.

Detailed guidance for each question on the NEPA questionnaire and example completed NEPA questionnaires can be found at:

- [NEPA FORM](#)
- [NSGO instructions and guidance document](#)
- [NSGO NEPA Field work example](#)
- [NSGO NEPA Lab work example](#)
- [NSGO NEPA Socio-economic example](#)

If you have any questions regarding completing the NEPA questionnaire for your project, please reach out to Jennie Rheuban via the email seagrant-research@whoi.edu.

6. Multi-year 90-4 Budget Form (not included in 10 page limit)

Please include in your budget funding for one 1 day in-person trip to Woods Hole during year two of your project.

The [multi-year 90-4 form](#) must be filled out for EACH YEAR of the proposal. The form will automatically calculate and summarize all years. If your budget includes a subaward, the subaward budget information should also be submitted in the form of a completed multi-year 90-4 form (again, one for each year of support).

Be sure to complete the header information. WHOI Sea Grant will provide the Prefix/Project #, so please leave blank. For Project Period, enter the entire duration of your project.

The multi-year 90-4 budget form is divided into two budget columns. The Sea Grant federal funds column indicates what you will request from Sea Grant to support the project. The Matching funds (or cost share) column indicates what you (your institution, collaborators, or partners) will commit to the project (see “Cost Sharing,” below, for more details about matching funds). Be sure to list the appropriate amounts within each category. It will be your responsibility to ensure cost share commitments are met on your project. Documentation for Cost Share with specified dollar amounts and approved signatures must be included.

Proposals from non-WHOI investigators will be awarded as a subcontract to your organization from WHOI. As a result, WHOI Sea Grant must add indirect costs to your proposal to cover the costs of managing the sub-award. These indirect cost charges, which will equal \$16,250 per proposal, must also be cost-shared by the PI’s home institution (or collaborating institutions). Therefore, all non-WHOI led proposals must include at least \$8,125 of additional matching funds in year 1 of the project budget.

7. Budget Justification (not included in 10 page limit)

In addition to preparing the budget worksheet, you must submit a budget justification that provides details for expenditures in the budget categories listed below, following the organization of the 90-4 form; **costs for each year must be listed separately**. For every dollar value you enter into your budget, you are required to enter a justification for that line item.

Multi-institution proposals should document all cost items in one summary budget justification (subawards must supply their own budget justifications). Please justify each budget item following the same headings as on the 90-4 budget form, indicating the item, the cost, and an explanation of the item, making clear which items are part of your request and which are part of the matching commitment.

Budget Categories:

A. Salaries and Wages

Actual numbers of personnel in each category should be shown in “No. of People”. The “Amount of Effort” columns refer to labor-months. The number you enter in these columns would be the total number of labor-months—by personnel category—for the total effort (Sea Grant request and matching funds). Please use months (not weeks, hours, years, etc.).

Under the “Sea Grant Funds” and “Matching Funds” columns, enter the dollar totals for all categories.

The line for “total salaries and wages” should show the *sum* of each category. *Budget Justification Tip:* In addition to listing name, title, months of salary requested, personnel cost, indicate the role each member will play in the project. The investigators’ commitments must be reflected as either funds requested or cost sharing funds.

B. Fringe Benefits

The dollar amount listed on the fringe benefit line should represent total fringe benefits for all personnel listed. If different rates apply to various personnel, note that in the budget justification.

C. Permanent Equipment

Permanent equipment is defined as tangible property with a unit value of at least \$5,000 and a useful life of more than one year. List each item and the cost. *Budget Justification Tip:* Briefly explain how each requested item of permanent equipment will benefit or be used for the project.

D. Expendable Supplies and Equipment

List supplies and expendable equipment, excluding general office expenses. Expendable equipment includes items under \$5,000 or having a useful life of less than one year. Software is categorized as expendable supplies, but software over \$5K is considered equipment. *Budget Justification Tip:* Provide a brief breakdown and explanation of anticipated needs for services, supplies, and expendable equipment, such as what you will purchase and how much each item will cost. You may group items under generic categories such as laboratory glassware. Do not include ordinary office expenses. “Miscellaneous” and “etc.” are not allowable terms to use in budgets or budget justifications.

E. Travel

List estimated transportation costs (including costs for ground transportation such as a personal car mileage or rental car), per diem, and lodging. Funds may be requested for work in the field, attendance at meetings and conferences, other travel associated with the proposed work, and per diem. **Persons using federal Sea Grant funds must travel by U.S. flag carriers.** *Budget Justification Tip:* Provide a brief explanation of each anticipated trip, including name of travelers, destination, breakdown of costs (i.e., per diem, airfare, ground transport), purpose, and how it benefits the project.

Please include in your budget funding for one 1 day in-person trip to Woods Hole during year two of your project.

F. Publication and Documentation Costs

Estimate the costs of publishing the results of this project.

G. Other Costs

List other direct costs as outlined below. *Budget Justification Tip:* List *other* items such as computer time, equipment rental, photocopying, communications (telephone, fax, and electronic mail charges), shipping/postage charges, shop services time, IS time, ship time, facility charges (e.g. Mass Spec, HP Plotter, ION Microprobe), consultants, GRA tuition, summer student fellows, subcontracts with associated costs and on separate lines. Again, “miscellaneous” and “etc.” are not allowable terms to use in budgets or budget justifications.

Subaward- If a portion of the proposal's research is to be completed by another institution or business, the work to be completed by the subaward institution should be described in the narrative of the proposal. Subawards are for entities that contribute to and participate in the research goals of the proposal. Analyses or other such services for fees are not subawards, but rather outside services. The following items must also be submitted for subcontracts:

- A separate Multi-year 90-4 budget form for each subaward and a budget justification listing costs for each year separately.
- Name and signature of the officer at the institution or business responsible for approving the subaward (need original as well as electronic copy). These subawards are also subject to the matching requirement.

Indirect Costs

An explanation for all indirect costs must be included in the budget justification.

8. Negotiated Indirect Cost Rate Agreement (if applicable)

Negotiated Indirect Cost Rate Agreements (NICRAs) are indirect cost rates negotiated and established in good faith by cognizant Agencies. Please submit a copy of your organization's NICRA should you have one, or you may apply the standard 10% de minimis rate to applicable budget categories. All subawardees including indirect costs in the proposal budget must also provide their organization's NICRA.

9. Cost Share Documentation with Approved Signatures (not included in 10 page limit)

Cost sharing funds are those portions of project costs that are not borne by Sea Grant. More specifically, Sea Grant funds should represent two-thirds of the total project cost, with the remaining one-third representing matching funds. These costs may be funded by your institution, your university, or by a third party. It is the responsibility of the PI and the PI's institution to ensure that cost share commitments are met as presented on the budget sheet.

In general, expenses that are allowable as project costs are also allowable as cost sharing. For example, salaries and related benefits paid from non-federal sources for faculty, staff, and students working on the project are allowable as cost share.

All cost sharing funds from colleges, departments, and outside sources should be listed on the budget form under the appropriate categories *and* described in the budget justification in detail. **Federal funds may not be used as cost sharing.** Documentation must be clear as to the specific dollar amount of cost sharing being provided, source (where the funds are from), and must be consistent with the budget and budget justification. Letters signed by the officer at the institution or business responsible for providing the proposed cost share must be included with the proposal. Multiple sources of cost share will require a separate certification for each source. (Sample Cost Share Form can be found in Appendix B)

Cost share is difficult to modify later and is a firm commitment. All PIs are asked to pay extra attention to cost share sources and documentation. (*WHOI PIs: Internal WHOI funding may be used for cost share on federal awards provided (1) the work supplements or benefits the proposal for which match is required; (2) the period of performance of the matching funds is within the period of performance of the prime award; and (3) sufficient funds remain in the account to be used as match and those funds will be retained for use during the period of the prime award.*)

Explanation of Cost Sharing or Matching Requirement:

A 50 percent match of the federal funds (i.e., one dollar of match for every two dollars of federal money received) is required on all Sea Grant proposals unless otherwise specified. In a multi-year award, the first year must contain at least 50% or more of the required match. If over 50% match was applied in the first year, then subsequent years must contain enough match to keep the cumulative match at or above 50% of the total amount of federal funding that has been received up to that point.

- **Example 1: Acceptable - 50% match in Yr 1 and Yr 2**
 Yr 1 Fed Funding = \$100,000, Match = \$50,000
 Yr 2 Fed Funding = \$100,000, Match = \$50,000
 Total Fed Funding = \$200,000, Total Match = \$100,000
- **Example 2: Acceptable - overmatch in Yr 1 keeps cumulative match above 50% overall despite undermatch in Yr 2**
 Yr 1 Fed Funding = \$100,000, Match = \$75,000
 Yr 2 Fed Funding = \$100,000, Match = \$25,000 (acceptable)
- **Example 3: Unacceptable - undermatched in Yr 1**
 Yr 1 Fed Funding = \$100,000, Match = \$49,000
 Yr 2 Fed Funding = \$100,000, Match = \$51,000
 Total Fed Funding = \$200,000, Total Match = \$100,000
- **Example 4: Unacceptable - undermatched over 2 years**
 Yr 1 Fed Funding = \$50,000, Match = \$45,000
 Yr 2 Fed Funding = \$100,000, Match = \$25,000
 Total Fed Funding = \$150,000, Total Match = \$70,000

**Non WHOI PIs: Please remember to add \$8,125 in matching for year one to your total for the overall WHOI Sea Grant match.*

10. Institutional Approval (not included in 10 page limit)

Proposals must be approved by the appropriate administrative unit for the lead organization and any subcontracting organizations.

If your proposal is selected for funding, you will also be required to fill out a 90-2 Project Summary Short Form, and more details will be provided at that time.

Admin Guidelines Specific to Proposals Being Prepared by WHOI PIs ONLY

For new proposals, please add the WHOI Sea Grant Fiscal Officer, Leslie Jonas, as a defined user at the proposal level. This will allow the Sea Grant office access to the budgets as the omnibus is being prepared. In the distribution box, indicate that the proposal is being submitted directly to Matt Charette in the Sea Grant office.

Appendix A

WHOI Sea Grant Investigator Conduct Expectations

WHOI Sea Grant is committed to ensuring that researchers and fellows maintain the highest scientific integrity and are provided with an equitable, positive, and respectful working and learning environment free of discrimination, harassment, and bullying. WHOI Sea Grant supported investigators and undergraduate, graduate, and postgraduate WHOI Sea Grant fellows and their supervisors are expected to represent WHOI Sea Grant with the highest integrity and ethical standards. They must abide by the standard code of conduct policies of their home institution(s) including, but not limited to, any: personnel policy, policy regarding sexual harassment, policy regarding workplace violence, and policy regarding ethical behavior. Furthermore, the funding provided through this research or fellowship award is subject to any NOAA policies relating to scientific integrity and sexual assault or harassment that may be in force at the time the award is issued. More details on these policies can be found in the subaward terms and conditions documents provided to you by the WHOI office of Grant and Contract Services.

Research Coordinator Jennie Rheuban will serve as your WHOI Sea Grant liaison with whom you are expected to keep in regular communication. If at any time during the award a situation arises that makes you uncomfortable, or you would like to talk about, please get in touch with this liaison. If you are unable to perform the duties of the award, or other tasks assigned to you, please contact us to discuss the situation. WHOI Sea Grant makes every effort to help you navigate conflict/challenges/roadblocks that come up.

Name: Jennie Rheuban
Phone: 508-289-3782
Email: jrheuban@whoi.edu

Appendix B

WHOI EXAMPLE COST SHARE APPROVAL FORM

Sea Grant Cost Share Authorization Form

**Principal
Investigator**

Project Title

Proposal No.

Amount Authorized for Cost Sharing by XXXX

TOTAL YEAR 1: \$

TOTAL YEAR 2: \$

Approved by:

Name

Date

Appendix C

Sea Grant Data Management Plan Form

Proposal Submission Phase

Title of the Proposal (required answer):

Name of the lead PI (required answer): Sea Grant requires that the lead PI serve as the data steward.

Contact Information (required answer):

Dataset Description(s) (required answer): What data will the dataset(s) contain? This includes descriptive details on data types, inclusion of metadata, data format(s), collection times / date ranges, etc. What name(s), if any, will be designated to the dataset(s)?

Do you agree to release all data no later than 2 years after the end-date of the project? (required answer):

Issues (required answer): Are there any legal, access, retention, etc. issues anticipated for the dataset? If yes, please explain.

Data Size: What will be the estimated size of the dataset? Please report estimated number of MB, GB, TB, etc., collected.

Data Format: What format will the dataset utilize? (i.e., Excel file, model code, audio/video recording, etc.)

Ownership (required answer): Who will own the dataset, if not the lead PI?

Post-Processing: What post-processing, QA/QC will this dataset undergo? Who will be responsible for performing this post-processing and QA/QC to prepare the dataset for its deposition into a repository?

Preservation Plan (required answer): What data repositories will be used to host the dataset? If none, how will the data be preserved?

Products: Will any information or data products be developed from this dataset? How will the related costs be supported? Which organization(s) will be producing these products?

Other Comments: Are there any additional comments related to the data that will results from your Sea Grant-funded study?