Woods Hole Sea Grant Biennial Request for Proposals

Funding cycle:
February 1, 2022–January 31, 2024

Pre-proposals must be received by:
4:30 pm Eastern Time, Friday, February 19, 2021
Pre-proposal instructions can be found on page 8

Full proposals must be received by:
4:30 pm Eastern Time, Friday, May 28, 2021
Full proposal instructions can be found on page 9

Other important dates and deadlines:
December 22, 2020: Release 2020-2021 request for preliminary proposals.

General informational webinars:
- January 4th, 2021 at 1:00pm EST. Webinar will be held via Zoom. Click here to register.
- January 25th, 2021 at 1:00pm EST. Webinar will be held via Zoom. Click here to register.

Virtual Extension Office Hours:
- Healthy Coastal Ecosystems: January 6th, 2021 from 10:00am-12:00pm EST. Click here to register.
- Sustainable Fisheries and Aquaculture: January 8th, 2021 from 1:00-3:00pm EST. Click here to register.
- Resilient Communities and Economies: January 11th, 2021 from 1:00-3:00pm EST. Click here to register.
- Environmental Literacy and Workforce Development: January 12th, 2021 from 10:00am-12:00pm EST. Click here to register.

Friday, February 19, 2021: Preliminary proposals due to Woods Hole Sea Grant office by 4:30 p.m. Please submit pre-proposal in pdf format to seagrant-research@whoi.edu.

No later than mid-April 2021: Principal Investigators receive recommendations regarding development of full proposals.

Friday, May 21, 2021: List of five suggested reviewers for full proposals due to Woods Hole Sea Grant office by 4:30 p.m. Please submit reviewers in pdf format to seagrant-research@whoi.edu.

Friday, May 28, 2021: Full proposals due to Woods Hole Sea Grant office by 4:30 p.m. Please submit full proposals to seagrant-research@whoi.edu.

Early October 2021: Applicants informed of decisions.

February 1, 2022: Anticipated start date for 2022-2024 research projects.

Anticipated funding: Approximately $1,000,000 will be available to support 5-10 research projects during the two year funding period. Sea Grant proposals require a match of $1 of non-federal funds for every $2 of federal funds requested.

Contact information: Questions should be directed to Jennie Rheuban (Research Coordinator) or Matt Charette (Director) via seagrant-research@whoi.edu.

Eligibility: Lead Principal Investigators for proposed projects must be staff or faculty at any public or private research or higher educational institution within the state of Massachusetts. Co-PIs outside the state of Massachusetts may be funded through sub-awards from the lead PI's institution. Researchers are eligible to submit only one pre-proposal as lead PI, but may serve as a co-PI on other proposals.

Introduction

Woods Hole Sea Grant (WHSG) requests proposals for two-year projects from investigators at academic, research and educational institutions throughout the state 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.

Program and Focus Area Priorities

Based at the Woods Hole Oceanographic Institution, Woods Hole 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. WHSG is part of the National Sea Grant College Program (NSGCP) 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 2022-2024 research competition, WHSG solicits proposals that directly address the one or more of the focus areas and program goals described in WHSG's Strategic Plan. Specifically, WHSG 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 are also welcome. In addition, advancing Diversity, Equity, and Inclusion (DEI) 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 and Inclusion

Woods Hole 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 Woods Hole 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 stakeholders from underrepresented or underserved communities.

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. WHSG 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. WHSG encourages applicants to consider addressing this important need through stakeholder engagement plans developed as part of your research proposal.

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 decline in water quality, loss of habitat, invasive species, and increasing pressure on coastal resources. For WHSG's 2022-2024 cycle, research priorities in this focus area include:
- Assessment of nutrient over-enrichment mitigation strategies.
- Interactions between climate change, coastal water quality, and ecosystem response to eutrophication.
- Assessment of the prevalence, bioaccumulation, and/or public health risk associated with contaminants of emerging concern.

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:
- Studies or technologies that foster expansion of sustainable aquaculture practices in Massachusetts.
- 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.

● Diversifying aquaculture and fisheries opportunities in Massachusetts.

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:
● Economic impacts of increased flooding on real estate, water resources, or coastal infrastructure.
● Coastal wetlands: factors affecting their resilience (e.g. water quality, storms, sea level rise), ecosystem service valuation, or facilitating adaptation to climate change related impacts.
● Development, implementation, and success of green infrastructure in reducing coastal erosion.
● Development of rapid and economical methods for quantitative assessment of shoreline changes pre- and post-large storm events.

Stakeholder 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 state of Massachusetts. Proposals must include a plan for disseminating findings and/or products to relevant stakeholders, or involving them directly in the research endeavor. A research project's potential application by Massachusetts stakeholders is an important consideration in advancing Woods Hole Sea Grant's mission.

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

Examples of stakeholder 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 stakeholders.
- 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 WHSG staff may work with members of a project team, salary costs associated with their participation do not need to 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.

WHSG extension staff will be holding office hours to provide potential PIs with an opportunity to discuss project ideas and engagement plans. Office Hours will be held by focus area. If you would like to attend an Office Hours session, please register via the appropriate Zoom link, and we will assign you a time slot within the Office Hours session.
- Healthy Coastal Ecosystems: January 6th, 2021 from 10:00am-12:00pm EST. Click here to register.
- Sustainable Fisheries and Aquaculture: January 8th, 2021 from 1:00-3:00pm EST. Click here to register.
- Resilient Communities and Economies: January 11th, 2021 from 1:00-3:00pm EST. Click here to register.
- Environmental Literacy and Workforce Development: January 12th, 2021 from 10:00am-12:00pm EST. Click here to register.

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 stakeholders; 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 a kickoff meeting at the beginning of the funding cycle, as well as an annual meeting with the Sea Grant staff to summarize findings to date. These meetings are designed to help align WHSG's research and outreach efforts. PIs (or their proxy) will present a short 10-12 minute presentation introducing their proposed research or preliminary findings. PIs will also be assigned a liaison from the WHSG staff with the most appropriate area of expertise based on project goals and activities. Please include in your budget funding for two 1-2 day in-person trips to Woods Hole over the course of your project.
- Assist Sea Grant communications staff with newsletter articles or press releases related to the funded research, or any other communications products.
- Update your WHSG 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. The reports should include specific impacts and accomplishments, and details on progress with the stated Engagement Plan. Details on impact

statements and metrics desired will be provided to researchers upon funding.
- Publish the results of their research in peer-reviewed journals. Provide the program with copies of any publication or product intended for public dissemination produced as part of, or as a result of, the project. This includes peer-reviewed reprints from journals, books and proceedings, brochures, pamphlets, news articles, DVDs, etc. These documents are submitted to the National Sea Grant Library (NSGL) at the University of Rhode Island. Only documents actually received and recorded by the NSGL count toward the program's performance.

Proposal Review and Selection Process

The proposal solicitation and review process is in compliance with the guidance set forth by the National Sea Grant Office. Selected proposal reviewers 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 Woods Hole Sea Grant staff, members of Woods Hole Sea Grant's advisory board (Marine Outreach Guidance Group, MOGG), 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 state 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 program officer for Woods Hole Sea Grant sits on the panel as an observer.

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

1) Rationale and innovativeness (20%)
2) Scientific merit, project objectives, methods and feasibility (25%)
3) Qualification (or expertise/promise) of the research team and results from prior work funded by Woods Hole Sea Grant (if applicable) (10%)
4) Relevance to the RFP priorities, focus areas, and WHSG strategic plan (20%)
5) Potential impact to Massachusetts stakeholders, and strength of engagement plan (25%)

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 WHSG 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 WHSG 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

Recommendations are submitted to the National Sea Grant Office for final 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 Woods Hole Sea Grant Focus Areas and Strategic Plan
6) Engagement Plan and primary stakeholder groups
7) Estimated Duration of Project (1 or 2 years)
8) Budget – Federal Request and Cost Share for each year
9) Please provide your institutional DUNS number, 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, Friday, February 19, 2021 to seagrant-research@whoi.edu. Questions should be directed to Jennie Rheuban via seagrant-research@whoi.edu. Woods Hole Sea Grant's strategic plan can be found here.

Full Proposal Preparation Instructions

List of Suggested Reviewers
    A list of 5 potential peer reviewers must be submitted by May 21, 2021 at 4:30pm, to seagrant-research@whoi.edu and include complete name, address, phone, 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 state of Massachusetts.

Proposals that do not adhere to the guidelines below may be returned to the PI without further consideration by the program.

Proposal Checklist:

To be submitted as a single pdf in the following order:
1. **Proposal Narrative (15 pages maximum)**
2. **Other Required Documents:**
    -References
    -Current and Pending per PI
    -CV(s) for PI(s) (2 pg. maximum)
    -Letters of Collaboration (if applicable)
3. **Data Management Plan**
4. **Abbreviated Environmental Compliance Questionnaire**
5. **Multi-year 90-4 Budget Form-*Excel* (also required for each subaward budget included in proposal)**
6. **Budget Justification (also required for each subaward budget included in proposal)**
7. **Cost Share documentation with approved signatures**
8. **Institutional approval**
    <u>*WHOI PIs*</u>: 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.)*
    <u>*Non-WHOI PIs*</u>: Proposal submission must be signed off by University or appropriate administrative unit in letter with a clear statement of work.

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)*

Details on proposal elements

1. Proposal Narrative (15 page limit)
    Proposals should be 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. No minimum number of pages is set for the narrative, but it should not exceed 15 pages. This maximum length includes tables and graphics but excludes references, current and pending, cost share letters, CVs,

subcontract budgets and budget justifications. Number all pages of the narrative with page number at the bottom center of each page.

Abstract (included in 15 page limit) – Provide a concise, one-to-two paragraph summary of your project.

Problem or Opportunity (included in 15 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.

Objectives (included in 15 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 15 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.

Engagement Plan (included in 15 page limit) – Describe your approach for engaging with and disseminating findings and/or products to relevant stakeholders outside of the scientific community and how they will serve to advance the Woods Hole Sea Grant mission to improve the translation of scientific information into knowledge for use in the marine environment. 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 stakeholders (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, stakeholders, and Woods Hole Sea Grant. 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 stakeholders arranged by category:

  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

Milestone Chart/Work Plan (included in 15 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 Woods Hole Sea Grant funding (included in 15 page limit) - If you have received funding from Woods Hole 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.

2. Other Required Documents (not included in 15 page limit)
    The following proposal components should also be included in your proposal:
    — References/Bibliography
    — Current and Pending (for each P.I.)
    — C.V. (for each P.I. – 2-page NSF style)
    — Letters of Collaboration (if applicable)

3. Data Management Plan (not included in 15 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 B) 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 B).

4. Abbreviated Environmental Compliance Questionnaire (not included in 15 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.

5. Multi-year 90-4 Budget Form (not included in 15 page limit)

Please include in your budget funding for two 1-2 day in-person trips to Woods Hole over the course of your project - one trip during year 1, and one trip during year 2 of your project.

The multi-year 90-4 form must be filled out for EACH YEAR of the proposal. If your project is only 1 year, then delete year 2. 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 will provide the Prefix/Project #, so please just 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, <u>Woods Hole Sea Grant</u> must add overhead to your proposal to cover the costs of managing the sub-award. These overhead charges, which will equal $16,250 per proposal, <u>must also be cost-shared by the PI's home institution</u> (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.

6. Budget Justification (*not included in 15 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.

<u>Budget Categories:</u>

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 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 two 1-2 day in-person trips to Woods Hole over the course of your project - one trip during year 1, and one trip during year 2 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 <u>must also be submitted</u> 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.

7. Cost Share Documentation with Approved Signatures (not included in 15 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 A)

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 Seagrant match.

8. Institutional Approval (not included in 15 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: if WHOIgrants was used in preparing the *pre*-proposal, the submission is now 01 and the type is "new". If WHOIgrants was *not* used in preparing the *pre*-proposal, the submission is 00 and the type is "new".
- For proposals continuing from our current omnibus (in which case a progress report is being submitted): in WHOIgrants, enter the original (current) proposal number (CHxxxxx) in the "PropLog" field and select "find." The converted record will appear. Right click on the "P" (proposal), which will show the converted WHOIgrants proposal number, and add a submission
- Add the Woods Hole Sea Grant Fiscal Officer 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 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 B

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?