



Sandy Hook Partnerships in Coastal Studies Research Opportunity 2023

Deadline to Apply: Feb 15, 2023

Executive Summary of Opportunity

The National Oceanographic and Atmospheric Administration (NOAA), James J. Howard Marine Sciences Lab (Howard Lab), New Jersey Sea Grant Consortium (NJSGC), Congressman Frank Pallone, and the Northeast Fisheries Science Center (NEFSC) have formed a partnership to fund a research opportunity for a faculty mentor and their trainees/students from a college or university to conduct a 1- or-2 year research project related to New Jersey coastal health. The research can be related to climate change, habitat health, human impacts on local marine and estuary ecology, fish biology, restoration, shellfish, oceanography, offshore wind energy, coastal communities, or other coastal health related topics. Our goal is to support research that enhances our understanding of New Jersey nearshore, estuarine, and offshore fisheries, habitats, and recreational opportunities. Projects can be experimental and based in the lab, based in the field, or a combination of both. We can provide seawater lab space at the Howard Laboratory at Sandy Hook, technical expertise, advice and/or mentorship from scientists within NOAA and communications/outreach support. The successful faculty/students applicant team will receive up to \$70,000 for a 2- year project or \$35,000 for a 1- year project. The students will be expected to report the findings of their research project broadly in the scientific and local communities incorporating data interpretation and/or visualization, and to perform outreach activities in the greater New Jersey region using multimedia education tools (such as video or infographics). The faculty mentor may create their team from students at their home institution and use the award to hire one or more students to work on the project as appropriate to the scope of the proposed project. We are particularly interested in funding a team that includes faculty and/or students from communities historically under-served in marine and environmental sciences. The team will work with us to accelerate our coastal health research program and bring novel ideas and solutions to regional challenges in conservation, management, and sustainability of our coastal marine resources. This is an excellent opportunity for students interested in working alongside professional scientists to launch a career in the marine sciences, and to contribute to the health of New Jersey's coastlines.

Background

The Howard Lab is a NOAA research facility with 11 seawater labs and co-located at the Gateway National Recreation Area with NJSGC - an ideal location for coastal research. In 2020, our community expanded an initiative to promote diversity and inclusion (D&I) by dedicating a seawater Cooperative lab (Co-Lab) and engaging a project liaison to support research activities on coastal health by students. Our

program aligns well with NEFSC and NOAA D&I Strategic Plans. In the Co-Lab, we seek to host innovative laboratory projects conducted by a diverse team. The research will commence in summer 2023. We are seeking proposals for coastal health-themed research projects to be implemented over 1- to 2-years by a faculty mentor from a college or university and one or several students paid from the grant funds. The successful applicant team will receive up to a \$70,000 stipend for a 2-year project or \$35,000 for a 1-year project to pay hourly wages and fund the research project expenses. The Howard lab will provide basic equipment, a seawater lab if needed, a project liaison, education and outreach support and advice/mentorship from our staff. NJSGC will administer the grant and contribute expertise on the human dimensions of coastal studies and outreach strategies. The Howard lab will partner with NJSGC to identify applicants and provide funding for the applicant team and their research and disseminate findings from the projects in meaningful outreach activities. For example, upon project completion, the funding recipient could present to K-12 schools in our area with large underserved student enrollment. Equally important is the introduction of new research ideas and skills to our staff.

About Us: Strategic Plans and Information about NOAA, Howard Lab, NJSGC, Our Partnership and Missions:

The primary mission of the Howard Laboratory is to conduct research in ecology, leading to a better understanding of both coastal and estuarine organisms and the effects of human activities on nearshore marine populations and their habitats.

[Northeast U.S. Shelf Regional Ecosystem](#)

People

To conduct our work, we partner with a diverse group of international, governmental, and academic scientists and students. The laboratory may provide space and other research support to these partners and visiting scientists. More than 20 scientists are located at the Howard Laboratory. Current federal research staff include contractors and employees from:

- NOAA
 - NEFSC's [Ecosystems and Aquaculture Division](#)
 - [Greater Atlantic Regional Fisheries Office](#)
 - [Office of Habitat Conservation](#)
- [Bureau of Ocean Energy Management](#)
- [National Ocean Service](#)

The lab also supports non-federal scientists from::

- [Rutgers University](#)
- [Monmouth University](#)

- [Marine Academy of Science and Technology](#)

Our Facilities

The lab has ~10,000 sq ft of seawater lab space and was built to support research on the effects of environmental change (natural and anthropogenic) on living marine resources to support their sustainability. There are both flow through and recirculating seawater laboratories, controlled temperature rooms and organic and inorganic chemistry laboratories.

New Jersey Sea Grant Consortium

Our mission: to promote the wise use of New Jersey's marine and coastal resources through research, education, and outreach. New Jersey Sea Grant Consortium is an affiliation of [colleges, universities, and other groups](#) dedicated to advancing knowledge and stewardship of the Garden State's marine and coastal environment. NJSGC meets its mission through innovative research, education, and extension programs.

Founded in 1969 as the New Jersey Marine Sciences Consortium, the organization has contributed leading research in the field of marine and environmental science. Since 1976 it has managed the New Jersey Sea Grant Program (NJSJG), part of a national effort that funds competitive research focusing on specific priority areas. In recognition of its academic and scientific achievements, the Consortium was awarded Sea Grant College status in 1989 and currently functions as a non-profit.

NJSJG provides equal opportunity for all New Jersey students and citizens to learn about the marine environment. Diverse, interactive, age-appropriate curricula range from pre-K through graduate level studies. Nearly 30,000 participants – students and their families, teachers, Scouts and the general public – take part annually in annual education programs and special events. For more than 50 years, the Consortium has served the state and the region by developing programs designed to resolve coastal issues, develop marine technology, formulate science-based policy, and improve science literacy among its citizens.

Learn more about the NJSJG by reading our [Annual Report](#) or reviewing our current [Strategic Plan](#).

Eligibility

This opportunity is for New Jersey college students working closely with a faculty mentor on research questions broadly applicable to New Jersey coastal health. The students must be enrolled at least part time at an accredited institute in New Jersey. Although no specific geographic requirement exists within the state, we cannot provide housing to the student and mentor, and therefore we will evaluate the practicality of travel / commute plans when awarding the funding. Stipend funds may be used for housing if a student(s) and mentor team from a different part of the state wishes to apply to this opportunity. We are committed to recruiting a diverse group of candidates and creating an inclusive environment for this unique partnership in research. We encourage applications from students who are first in the family to go to college, who identify as coming from an underserved community, or who come from a community that is under-represented in marine biology based on their race, gender, sexual orientation, socioeconomic status, neurodiversity, or other factor. We hope to recruit a "team" of the college student(s) (applicant) and their mentor (Co-applicant) to conduct research at the Howard Lab. The team will have access to our seawater Co-Lab, a research liaison, staff technical and scientific expertise, communications and outreach support, and the guidance and expertise of our partners at NJSJG. The total amount of time spent in the lab on a weekly basis is flexible and totally incumbent upon the experimental design proposed by the team. We do have technical support available to provide

oversight for experiments when the applicant's research team is unavailable to be present in the lab. We view this as an opportunity for collaboration, mentorship, and for building a more diverse research community.

Fellowship Requirements

1. Perform authentic outreach activities during and after completion.

Community engagement and societal relevance are critical to all Sea Grant efforts. Each proposal submitted to NJSGC must include a detailed outreach plan that describes how broader audiences can use and benefit from anticipated results. Research projects that offer benefits and societal impacts to coastal communities, including those with stakeholders from under-represented or under-served groups, are strongly encouraged. A robust outreach plan should define the target audience(s), the rationale for choosing the target audience(s), planned activities with the target audience(s), and how the effectiveness of the outreach plan will be evaluated. Because NJSGC supports scientific excellence that addresses relevant coastal issues and achieves broader impacts including, but not limited to policy, management, education (formal and/or informal), and socio-economic impacts, the application of research results through NJSGC's extension, communications, and education programs or by other means is a key consideration in selection for funding. Applicant teams (student/mentor) are strongly encouraged to contact NJSGC extension, communications, and/or education personnel well in advance of the application deadline to help prepare the outreach section of their proposal. Please note all funded teams will have an NJSGC liaison assigned to them if they did not identify one in their proposal. The liaison will assist the Principal Investigator in ensuring the integration of outreach into the research. Collaboration with industry and/or state and regional agencies is also encouraged.

2. Be able to pass a federal security check

To work in our facility all scientists, staff, and managers must clear a background check that must be completed before anyone works in the Howard Lab. Therefore, the student and the mentor must pass a minimum-security background check that requires fingerprints and which will take up to 6 weeks. The cost for this background check will be paid by NOAA.

3. The proposed research must include New Jersey coastal health-themed questions.

We are open to proposals that include research questions aimed at enhancing our knowledge of marine or estuarine environments in New Jersey. Research projects may be completely done in the surrounding Sandy Hook Bay, in the lab or the field or a combination of both. We have very limited ship access but nearshore locations accessible by land can be considered. Although we will consider computer-based projects (modeling, simulations, informatics) our preference is for projects that will utilize our facilities' seawater capabilities, geographic location on Sandy Hook Bay, or both.

Proposal Elements

Part 1: This part should be written by the students with the faculty mentor's guidance. Each student that is planning to work on the projects should answer all sections of Part 1. It is fine if there is overlap as they are all working on the same project with the same mentor.

- **Signed Title Page and abstract** (*two-page maximum*): The title page must list the project title and identify and provide contact information for the prospective student(s) and faculty advisor. The proposed start and end date should be clearly listed. The title page should include a Research Abstract of up to 200 words, summarizing the research project you will be working on. Please include the project's objectives, methodology and rationale.
- **Career and Professional Development Goal Statement** (*one-page maximum*): The statement should describe your educational and professional goals and ambitions, professional growth interests and objectives, and how these goals relate to broader societal needs in the coastal and marine environment. The statement should emphasize how past experiences and competencies contribute toward your short- (1-5yr) and long-term (>5yr) goals and in particular, how this research opportunity would contribute toward those goals. Speak to your leadership potential, communication ability, stakeholder engagement interests or experience, and include any pertinent information that provides insights into your past choices and future interests. Illustrate what motivates you today and moving forward with your research and their applications.
- **Personal statement** (*no page limit, please go into as much or as little depth as you want to introduce yourself*) The Partnership in Coastal Studies Research is dedicated to increasing diversity in the marine and environmental sciences. We seek students from a variety of backgrounds who can be productive, contributing members of a research team. What are one or two personal traits or life experiences you will bring to add value to the coastal research effort in New Jersey?
- **Professional Mentor and Outreach Plan** (*one-page maximum*): The plan should be developed with your faculty mentor to identify specific objectives of both the research and the required outreach activities to be conducted during the fellowship. What can you do to share your experience to promote others to explore a similar career?

Who are the target audiences for the outreach activities on your research?

What types of data will you produce once the research is completed? What is the major goal of the research? How will you and the mentor interact to achieve the goals (e.g., frequency, timeline, means of communication, topics, etc.)?

- **Recommendation Letters** (*submitted separately*): Two letters of recommendation should be submitted in support of the student. To maintain confidentiality, letters should NOT be

submitted with the student's proposal; instead, letters should be sent directly to Dr. Peter Rowe by their authors. (prowe@njseagrant.org)

One letter of recommendation should come from the student's primary academic advisor or faculty mentor who is the PI on the research award the applicant will be working on during the fellowship. Co-advisors may submit a joint letter, or they may submit separate letters. There is no page limit for letters, but the sponsors recommend that letters not exceed two pages and not include attachments. Referees are encouraged to consider the student's:

- academic and professional performance, including record and relevant experience
- academic and professional potential for future success, including research and professional activities in integrated, trans-disciplinary settings
- responsibility, motivation, integrity, and creativity
- teamwork and leadership skills and potential, and ability to identify and understand the *big picture*, and connections among perspectives
- Interest and competencies in the science-to-management process, science communication to non-experts, and capabilities and issues of relevance to their mentor relationship, and outreach activities
- Description of the impact this opportunity could have on the student's forward momentum

For the second letter of recommendation, applicants are encouraged to consider someone who might know the applicant from a different perspective (e.g. religious leader, community leader, family friend, someone you have worked with on a project). It is most important to select someone who will write a strong letter for you, but an "outside" perspective helps to demonstrate your diversity and will likely highlight different strengths and experiences.

F. **Resumes/CVs** (*two-page maximum per Resume/CV*): A brief resume or CV should be included for the student, and the faculty mentor(s). The student resume can include non-academic jobs, volunteering, relevant classwork, and hobbies that demonstrate leadership or teamwork.

Part 2 - This section is to be written as a team by the faculty mentor and student. We expect the faculty mentor to lead on the writing of this section and mentor the student on how to put this type of proposal together.

- **Project Narrative** (*six-page maximum, including figures, tables, and other graphics but excluding literature cited and data management plan*): Project title and name of student(s) must be included in the header. The narrative is intended to be a brief summary of the proposed thesis or area of study but should include sufficient detail to evaluate the appropriateness and relevance of the research and outreach approach, and the alignment of the project with the missions of Sea Grant and NOAA.

The narrative should include the following subsections:

- **Introduction**: Provide background information, rationale for the research project, and how the

proposed project addresses the research priorities described in this announcement.

- **Research Plan:** This section should briefly describe the research methods, approaches, and techniques that will be used to meet the project's objectives. Students should describe the experimental design, data sources to be used, how data will be accessed, and any facilities and equipment requirements. Students clearly describe how their research goals, objectives and tasks align with their milestone chart (see below).
- **Outcomes and Broader Societal Impacts:** Describe the research results to be achieved by the project, how these results relate to current knowledge of the topic, and of what use the research and results will be for specific audiences or end-users. What difference will the research make to society?
- **Fellowship Milestone Chart / Timeline:** Provide a timeline of research, professional development, and outreach activities and accomplishments you hope to achieve over the duration of the fellowship. This should include the initial outline of a research and individualized professional development plan. It is expected this chart will align with the research objectives and will be expanded in consultation with the professional mentor and faculty advisor as the research project evolves.
- **Research Team and Coordination:** Briefly describe the research team and their roles and responsibilities, including the role of the applicant and academic advisor(s). Describe briefly what kind of support and expertise would your project want from the JJ Howard staff?
- **Literature Cited** (*does not count toward page limit*).
- **Budget and Budget Justification:** The research grant is for up to a \$70,000 stipend for a 2-year project or \$35,000 for a 1-year project. The sponsors strongly encourage applicants to work with their institution's research administration or sponsored programs office to develop their budgets.

You can find the 90-4 budget page at <https://njseagrant.org/research/forms/> Budget justification must be written for each year separately.

Review and Selection Process

A technical review panel will be composed of diverse individuals from academia, agency, and industry. Preference will be given to applicants (mentor, student(s), both) from historically underserved and underrepresented groups. Applications will be scored according to the rubric posted below.

Each proposal will be evaluated according to the following criteria and weighted as indicated in each element: **out of 100 pts**

1. Importance and applicability of the proposed project to the NEFSC goals (25 points). See <https://www.fisheries.noaa.gov/about/northeast-fisheries-science-center> for more information about our program goals. This criterion assesses whether there is intrinsic value in the proposed work and/or relevance to program priorities.

For this criterion, we will evaluate the application based on the following:

a. New Jersey Coastal Health question addressed (15 points) Does the project address a knowledge gap, new innovation, or solve a problem in the sustainability, management, and resilience of New Jersey's estuarine and marine environments?

b. Community benefits (10 points) Do the project outcomes have direct benefits to local communities? Will the project outcomes improve local or regional approaches to coastal health and resilience in the short, medium, and long terms?

2. Technical and scientific merit (30 points). 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:

a. Project description and milestones (10 points) - Does the proposal include sufficient detail to assess the merit of the planned actions? Does the proposal include a realistic timeline of key milestones and deliverables?

b. Methodological strength (10 points) - Are the proposed actions feasible? Does the proposed approach have a decent chance of success? Are performance measures and metrics of success explicitly stated by the applicant?

c. Deliverables (10 points)- Does the proposal include clear deliverables? Are the deliverables likely to contribute to advances in New Jersey coastal health? Are the deliverables useful and usable to communities - specifically underserved communities - and stakeholders?

3. Overall Qualifications and Strengths of Applicants (10 points). This criterion assesses whether the applicant and mentor possess the necessary education, experience, training, facilities, and administrative resources to accomplish the proposed activities. Does the project team demonstrate the necessary technical experience and background in planning, design, and management in order to

successfully carry out the project? Will conducting this project give the applicant the opportunity to grow and achieve in a new field?

4. Community Engagement, Diversity, Inclusion, and Outreach (35 points). 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 NOAA's mission to protect the Nation's natural resources, Sea Grant's strategic focus areas, and the goals of the individual competition announcement to target audiences. This criterion also assesses how well the project engages underserved communities and will further NOAA's mission of inclusive and diverse scientists and science. For this criterion, applicants will be evaluated based on the following:

a. Inclusive planning and engagement - Are local communities - including underserved communities - meaningfully benefit from education and outreach generated by the project engaged in project activities? (10 points)

b. Education and workforce development (10 points) - Does the project enhance coastal health literacy? Is there a clear strategy to share information about the project's work on New Jersey's environments to a broad audience through formal or non-formal education? Does the project reach the community members most likely to implement innovation and development? Does the project help develop the awardee (student's) development as a future leader in science and outreach?

c. Sea Grant engagement (5 points) - Are Sea Grant activities fully supported and utilized?

d. Project Costs (10 points). This criterion assesses whether the project budget is realistic and with the project's needs and timeframe. Does the budget adequately cover the proposed activities? Are the spending levels appropriate compared to market value? Where possible, do the funds spent flow to and support local communities?

TOTAL: 100 pts

Voluntary Demographics Survey

Per US Department of Commerce Requirements, NJSGC is required to ask the below VOLUNTARY demographic question. Responses, or non-responses, have no relation to or bearing on the proposal review process or evaluation.

Please provide the following information for all named collaborators on your proposal. If you choose to respond, please use this optional form for collecting the information and do not include as part of your application package.

https://docs.google.com/forms/d/e/1FAIpQLSdljYevtFZD2cFT5e_6nsd_YNNbgOuu-i7UdcPVIDN5VndaVg/viewform

Timeline for Fellowship for a 1-year project (a second year can be proposed by the applicant)

December, 2022 – RFP released and circulated to NJ Consortium Members, and other New Jersey Tri-State and Mid-Atlantic Minority Serving Institutes.

January – February, 2023 informational sessions at regional institutes.

Feb 15, 2023 Applications due.

March 15, 2023 Award announced. Funds available April 1, 2023 and projects can begin as early as May 1, 2023 on site at Sandy Hook Lab.

October –November, 2023 Projects (on site) wrap up for the 1-year option. Activities may continue into 2024 if the team requests a 2-year timeline.

May 1, 2024 – Project report due – multimedia, report on outreach activities. Communications Blitz!
This will be the final report for the 1-year option, or a mid-project report for the 2-year option.

Contact Information

Please send inquiries about this fellowship opportunity to Dr. Ann Petersen ann.petersen@noaa.gov

Please submit your completed application and letters of recommendation to Dr. Peter Rowe
prowe@njseagrant.org

NOTES FOR FUNDED PROJECTS

- Principal Investigators of successful proposals will be required, when relevant, to submit documentation of approval for any Institutional Review Board (IRB) or Institutional Animal Care and Use Committee (IACUC) compliance.
- Principal Investigators of successful proposals will be required to submit a Data Management Plan using the provided [Data Management Plan Form](#) on NJS GC's website.
- All proposals recommended for funding will require completion of an Abbreviated Environmental Compliance Questionnaire prior to submission by NJS GC to National Sea Grant Office (NSGO) for review. See <https://njseagrant.org/research/forms/>
- All proposals recommended for funding will require completion of a 90-2 Project Summary Form (Proposal Summary Form 90-2) prior to submission by NJS GC to NSGO.
- All funded projects will be required to include acknowledgment of NOAA/NEFSC/ NMFS and NJS GC support and resources which contributed to the final project.

Please contact Dr. Peter Rowe if you have any questions prowe@njseagrant.org