



## **Delaware Sea Grant College Program Request for Proposals Funding Period February 1, 2024 through January 31, 2026**

**Issue Date:** Monday, November 7, 2022, 3:00 p.m.  
**Question & Answer Sessions:** Tuesday, December 13, 2022, 10:00 a.m. (Newark)  
Wednesday, December 21, 2022, 2:00 pm (Virtual)  
Thursday, January 5, 2022, 10:00 a.m. (Lewes)  
**Pre-proposal Due Date:** Friday, February 3, 2023, 3:00 p.m.  
**Full Proposal Due Date:** Friday, April, 21, 2023, 3:00 p.m.

The Delaware Sea Grant College Program is soliciting research proposals for the next two-year funding period that begins on February 1, 2024. Contingent upon available funds, funded projects will receive graduate student support upon request for the two-year period.

Support for research and graduate student education provided through this request for proposals (RFP) comes from leveraged federal and state funds. Delaware Sea Grant is obligated to maximize the return on this investment for Delaware stakeholders. Please read this document carefully. It is intended to guide prospective researchers through the competition, towards the development of successful proposals by cooperatively identifying stakeholder needs, research goals and objectives, and meaningful outcomes. This competition for funding is designed to produce the strongest package of applied research<sup>1</sup>, extension, education, and outreach<sup>2</sup> possible.

Proposed projects should address coastal challenges and opportunities that are important to the state of Delaware. Proposals from a broad range of disciplines regarding a diversity of topics that align with the [Delaware Sea Grant Strategic Plan](#) are encouraged. The Delaware Sea Grant Strategic Plan specifically identifies research needs associated with climate change adaptation, exploration of the blue economy in Delaware, and ecosystem restoration. In addition to these needs, there are countless other opportunities to advance the objectives of Delaware Sea Grant through applied research. Researchers should carefully consider the priority issues and objectives presented in the Delaware Sea Grant Strategic Plan to identify areas where applied research will help advance the organization's mission and vision.

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<sup>1</sup> Consistent with the National Oceanic and Atmospheric Administration (NOAA) Administrative Order 216-115A, this RFP considers applied research to be "original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific, practical aim or objective. Applied research is undertaken either to determine possible uses for the findings of basic research or to determine new methods or ways of achieving specific and predetermined objectives." (NOAA Administrative Order 216-115A, issued 10/3/2016: [https://www.corporateservices.noaa.gov/ames/administrative\\_orders/chapter\\_216/216-115A.html](https://www.corporateservices.noaa.gov/ames/administrative_orders/chapter_216/216-115A.html))

<sup>2</sup> In accordance with *Fundamentals of a Sea Grant Extension Program* (<http://nsglc.olemiss.edu/projects/advocacy/files/extension-fundamentals.pdf>), the broad goal of extension, education, and outreach is to effect change by having individuals, groups, or institutions use science-based information. Delaware Sea Grant considers extension to be using research results to inform decision-making; education to be the teaching of Sea Grant and other relevant coastal and environmental information as part of a formal learning process (e.g., focused on K-16 students/teachers); and outreach to be education that occurs in a more informal setting (e.g., summer camps, festival exhibits).

## Special Topic Areas

The Delaware Sea Grant College Program is particularly interested in funding projects focused on two topics: (1) understanding the effects of **ocean renewable energy development**, specifically offshore wind, on Delaware's coastal ecosystems and communities, and (2) advancing the management of **horseshoe crabs** for multiple uses, including ecological value, commercial fisheries, and biomedical research. The goal of the first special topic area is to catalyze ecological, technology, and social science research to establish baseline data and improve understanding of the potential effects of ocean renewable energy development on the coastal environment, community resilience, and economies. The goal of the second special topic it to support research that will further inform management of the harvest of horseshoe crabs in the Delaware Bay. For both special topic areas, findings should benefit multiple stakeholders, including federal and state regulators and decision-makers, developers, communities, and multiple users of Delaware's coastal environment (e.g., commercial and recreational fishers). Successful research proposals will undertake collaborative, multidisciplinary, and/or innovative approaches with results that will be applicable and/or useful to stakeholders and users in Delaware and throughout the mid-Atlantic region.

## Available Funding

Two tiers of funding are available:

- **Topic-Focused Research Projects:** These "traditional" research projects will receive up to \$75,000 per year and may be single or multi-investigator projects within a single discipline (science, engineering, social, behavioral, or economic sciences) that address significant coastal or marine issues facing Delaware.
- **Interdisciplinary<sup>3</sup> Research Projects:** These multi-investigator projects will receive up to \$115,000 per year for the two-year funding cycle. The intent of proposed interdisciplinary projects shall be to explore multi-faceted research questions at the intersection of science or engineering and social, behavioral, or economic sciences. To be eligible to receive the higher level of funding for interdisciplinary research, proposed projects must include investigators with expertise in at least two distinct disciplines (e.g., physical, chemical, or biological sciences, or engineering, partnered with social, behavioral, or economic sciences).

Interdisciplinary Research Projects will be eligible for support for up to two graduate students, one must be in each discipline; Topic-Focused Research Projects will be eligible for support for a single graduate student. The number of Interdisciplinary and Topic-Focused Projects that are funded will depend on the quality and number of proposals received and will be made at the

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<sup>3</sup> Consistent with the definition adopted by the National Academies, this RFP considers interdisciplinary research to be "a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice." (Committee on Facilitating Interdisciplinary Research, Committee on Science, Engineering, and Public Policy. 2004. Facilitating interdisciplinary research. National Academies. Washington: National Academy Press, p. 2)

discretion of the Director of the Delaware Sea Grant College Program in accordance with the competition guidelines presented in this RFP.

The proposal process involves two main steps:

1. Prospective investigators submit a pre-proposal by 3 p.m. EST **Friday, February 3, 2022**
2. Prospective investigators submit a full proposal by 3 p.m. EST **Friday, April 21, 2022**

### **Integration between Research and Extension**

Extension is a hallmark of the Sea Grant College Program. Within the Sea Grant network, extension is considered to be the application of knowledge and understanding gained through research that is shared with individuals and groups of people for their benefit<sup>4</sup>. Prior RFPs issued by the Delaware Sea Grant College Program required all research proposals to incorporate extension into the project in the form of a plan that explicitly described how the proposed research would be extended or adapted for end-users outside of scientific peers.

In an effort to more effectively implement extension activities, and to encourage collaborative work between extension professionals and the research community, under this RFP extension plans will be developed only after projects are funded; a full extension plan is not required in either the pre- or full proposal. Proposals should instead include a *brief* description of *potential* ideas for extension activities and should identify stakeholders that will benefit from the research (e.g., resource managers, community officials, private sector businesses). Proposals should also specify how those stakeholders would specifically benefit. The Delaware Sea Grant College Program will then work collaboratively with researchers after they receive funding to develop and administer a full extension plan. Additional funding will be made available for extension and outreach activities. Details regarding these commitments are presented in subsequent sections.

### **Eligibility**

The Delaware Sea Grant College Program encourages participation from the broad science and social science research community within Delaware and invites participation by investigators new to the Delaware Sea Grant RFP process.

The Delaware Sea Grant College Program is committed to building an inclusive program that serves all people including those with unique needs, circumstances, perspectives, and ways of thinking. Eligible applicants of all ages, races, ethnicities, national origins, gender identities, sexual orientations, abilities, cultures, religions, citizenship types, marital status, job classifications, veteran status, and socioeconomic status are encouraged to apply.

To be eligible, principal investigators must be affiliated with an academic institution, research laboratory, or other institution with a research or science-based mission in Delaware, including non-profit organizations. Co-principal investigators on projects may be from institutions outside of Delaware. Please note that individuals from state and federal agencies and private sector for-profit and foreign organizations cannot apply for direct support; however, their non-federal

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<sup>4</sup> Fundamentals of a Sea Grant Extension Program, Second Edition.  
<http://nsglc.olemiss.edu/projects/advocacy/files/extension-fundamentals.pdf>

contributions may qualify as matching funds for the project. Detailed information regarding required match is presented subsequently. Principal investigators are encouraged to include Delaware Sea Grant Marine Advisory Service personnel as project collaborators; however, Marine Advisory Service staff should not have oversight of project budgets and should not advise Delaware Sea Grant funded graduate students. Delaware Sea Grant Marine Advisory Service staff are also prohibited from requesting salary support.

To be eligible to submit a full proposal, applicants must submit a pre-proposal. Pre-proposals will be reviewed for relevance to the [Delaware Sea Grant Strategic Plan](#) and anticipated benefit to stakeholders. Comments and feedback will be provided to prospective researchers to guide development of the full proposal and maximize the value of proposed research. Regardless of the feedback, all prospective investigators who submit a pre-proposal are welcome to submit a full proposal.

Full proposals will be evaluated through a three-phase, competitive process, which will consist of peer review, followed by reviews by both technical and programmatic panels. Equal weight will be given to the technical and programmatic panel reviews, which will take into consideration feedback from the peer reviews. The decision to recommend proposals for funding will ultimately rest with the Delaware Sea Grant Director and will be made at her discretion to address needs, gaps, and priorities of the Delaware Sea Grant program as outlined in the Delaware Sea Grant Strategic Plan. Full proposals that are recommended for funding by the Director will be forwarded to the National Sea Grant Office for final funding approval as part of the Delaware Sea Grant Omnibus proposal package. Of note, inclusion of a proposal in the Omnibus proposal package does not guarantee final approval or funding.

Please use the following guidelines to prepare a proposal. Delaware Sea Grant encourages prospective researchers to read this document carefully, review the frequently-asked-questions ([FAQ](#)) document available on the Delaware Sea Grant College Program website, and participate in the designated Question and Answer Sessions. Any remaining questions concerning the RFP may be directed to Christian Hauser, the Delaware Sea Grant Associate Director, at [hauser@udel.edu](mailto:hauser@udel.edu).

## **Background**

The Delaware Sea Grant College Program supports applied coastal and marine research and extension, graduate student education, professional development, and public outreach and education. It is a member of a national network of 34 university-based Sea Grant programs that are located in coastal and Great Lakes states around the nation. Delaware Sea Grant operates under the guidelines of the National Sea Grant College Program, which is part of the National Oceanic and Atmospheric Administration within the U.S. Department of Commerce. Delaware Sea Grant is reviewed and evaluated for progress in achieving strategic plan goals and outcomes across the functional work areas described below. Federal funding is dependent upon successful, competitive reviews.

The Delaware Sea Grant College Program is a partnership between university, government, industry, and public stakeholders and is dedicated to the wise use, conservation, and management of coastal and marine resources. The program seeks to bring together the best talent from

Delaware's academic institutions to address coastal challenges and opportunities. It also offers the unique capability to transfer research-derived technology and information to the public through its team of Marine Advisory Service and Environmental Public Education specialists, and to leverage our University-based national network. Delaware Sea Grant views the integration of applied research and extension as a key component of the program.

### **Functional Work Areas**

Operations of the Delaware Sea Grant College Program are guided by a strategic plan ([Delaware Sea Grant Strategic Plan](#)), which is an integrated response to the research, extension, education, and outreach needs identified within Delaware. The Strategic Plan details research and extension priorities and future directions organized by functional work areas.

Each functional work area has associated goals, priority issues, and objectives. Prospective researchers must indicate in their pre- and full proposals what priority issues and objectives their work will address.

### **Budget and Match Funds**

All proposals must include a budget for the funding period. A 50 percent match of the awarded funds is required for all proposals (i.e., one dollar of match is required for every two dollars of grant money received under this RFP). Match may be in the form of selected "in-kind" services or additional funds from a specified institution, agency, industry, or nonfederal program. No funds from federal entities can be used as match. If applicants are struggling to either document or obtain sufficient match funds, please contact Christian Hauser ([hauser@udel.edu](mailto:hauser@udel.edu)) as soon as possible in the pre- and full proposal processes. Applicants should take note that Delaware Sea Grant will work with potential applicants to resolve any issues regarding match.

### **Pre-Proposal Requirements and Review**

***Pre-proposal:*** Pre-proposals are required for all projects; to be eligible to submit a full proposal applicants must submit a pre-proposal. Before submitting a pre-proposal, prospective researchers are asked to schedule a meeting with the Associate Director of the Delaware Sea Grant College Program to discuss relevance and utility of the proposed research and possible opportunities for extension. This meeting should be scheduled by contacting Christian Hauser ([hauser@udel.edu](mailto:hauser@udel.edu)) via email.

The pre-proposal process, including this meeting, is designed to give potential investigators feedback about anticipated funding success and ensure funded projects are relevant to Sea Grant's mission, stated goals, and implementation strategy. Pre-proposals should present a succinct but sufficiently detailed synopsis of the project in order to evaluate its relevance. Pre-proposals are not letters of intent and will be evaluated rigorously. Encouragement of full proposal submission is not a guarantee of funding.

***Submission:*** Pre-proposals must be submitted by email to Christian Hauser ([hauser@udel.edu](mailto:hauser@udel.edu)) by **3 p.m. EST Friday, February 3, 2023.**

***Style and Format:*** Minimum font size 12 pt. Minimum margin size one inch. Pre-proposals

should be single-spaced.

**Content and Organization:** Pre-proposal submissions must include the following sections (1-5) in the order listed. Letters of support (section 6) are optional.

**(1) Title Page:** Maximum 1 page. This page must include, in the following order:

- Name, affiliation, and contact information for each investigator<sup>5</sup>
- Project title
- Project duration in months (not to exceed 24 months)
- Whether the proposal is for an Interdisciplinary Research Project or a Topic-Focused Research Project
- Total amount requested from Delaware Sea Grant and cost share provided
- A request for graduate student support, if needed, and the number of students for which support is being requested. Topic-Focused research projects may request one graduate student. Interdisciplinary research projects may request up to two graduate students.
- Applicable Delaware Sea Grant focus area(s)

**(2) The Pre-proposal (main body of text):** The body of the pre-proposal must be no more than 4 pages in length. It must contain the following sections:

Research Objectives: Describe what is being proposed, what the research will accomplish or determine, and how the project will improve understanding. For Interdisciplinary Research Projects, indicate the role of each investigator in achieving the objectives.

Relevance to the Delaware Sea Grant Strategic Plan and Stakeholder Needs: Describe how this research addresses goals outlined in the [Delaware Sea Grant Strategic Plan](#). Indicate stakeholders that will benefit from this research (e.g., resource managers, education professionals, community officials, private sector businesses) and how they will benefit. Be specific: Has the need for this research been communicated and if so, by whom? What is the motivation for this research?

Research Activities: Describe how the project will be carried out, including methodology, relevant partners and their role, and any equipment or facilities requirements. For Interdisciplinary Research Projects, describe coordination among investigators.

Community / Stakeholder Impacts: Describe the connection between the proposed research and possible community, policy, management, education outcomes, industrial applications, and/or changes in environmental conditions that may result from the project. Include anticipated outputs and outcomes of the research, as described by the National Centers for

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<sup>5</sup> Similar standards to peer-reviewed authorship should be used to select principal investigators, i.e., named investigators should provide substantial contributions to the conception or design of the work; the acquisition, analysis, or interpretation of data for the work; and should participate in drafting the work or revising it critically for important intellectual content.



Coastal Ocean Science<sup>6</sup>. Outputs are defined as new information or products that result from the research. Examples include, but are not limited to, tangible services, results, and/or products, such as workshops, presentations to stakeholders and/or other related audiences, print or online resources, lesson plans, peer-reviewed publications, patents, festival exhibits, etc. Outcomes are changes in the knowledge or actions of the user, or a societal or environmental benefit that results from research. Note if stakeholders have participated in development of the proposal, and if so in what capacity. *Briefly* describe potential extension activities: How will results of this research be communicated to stakeholders identified above? What other audience(s) may benefit from this research? As noted previously, a full extension plan will be developed only after projects are funded.

**(3) References:** List any relevant scientific or technical references included in the pre-proposal text.

**(4) Curriculum Vitae (CV):** Maximum length: one page per investigator. Each CV should contain five distinct sections after the investigator's name and academic title:

- Education
- Experience
- Research Interests
- Professional Activities
- Publications (include no more than five publications for each investigator)

**(5) Budget:**

*Budget 90-4:* The Sea Grant Budget Form 90-4 can be found at:

<https://seagrants.noaa.gov/insideseagrant/Implementation><sup>7</sup>. Maximum 1 page. For the pre-proposal, only a cumulative, 24-month budget is required. The initiation date for new projects in this proposal cycle will be February 1, 2024. Award maximums are set at \$115,000 per year and \$75,000 per year, including indirect costs, for Interdisciplinary and Topic-Focused Research Projects, respectively. Include estimates for any equipment purchases, required ship time, salary support, and other expenses. **Do not include funds for graduate student support or extension activities in the budget.** Contingent upon available funds, graduate student support for the two-year period will be provided under a separate budget. Additional funds to support extension efforts will be available upon request after development of an extension plan. Match should be included in the budget. Please contact Christian Hauser ([hauser@udel.edu](mailto:hauser@udel.edu)) as soon as possible to resolve any issues regarding match. Please contact your department research administrator to complete your budget. Contact Lori Hans, Delaware Sea Grant Fiscal Officer, at [lhans@udel.edu](mailto:lhans@udel.edu) if you have questions.

**(6) Letters of Support:** Optional. Any project-specific letters of support for the pre-proposal from end-users (such as resource managers, community officials, private sector businesses, etc.) may be included in the pre-proposal.

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<sup>6</sup> National Centers for Coastal Ocean Science. Outputs and outcomes. <https://coastalscience.noaa.gov/about/funding-opportunities/outputs-and-outcomes/>

<sup>7</sup> Please download: 90-4 Budget Form (Zip file containing Excel version of the form)

**Pre-proposal Review:** Pre-proposals will be reviewed for the following elements by a committee consisting of Delaware Sea Grant College Program management, Marine Advisory Service staff, and members of the Delaware Sea Grant Advisory Council:

1. Relevance to the goals and objectives outlined in the [Delaware Sea Grant Strategic Plan](#)
2. Stakeholder need
3. Community / stakeholder impacts
4. Scientific merit
5. Cost effectiveness

Qualitative comments and feedback will be provided to prospective researchers to guide development of full proposals and to ensure that the value of proposed research to user groups is maximized. Regardless of the feedback, all prospective investigators that submitted a pre-proposal are eligible to submit a full proposal.

### **Full Proposal Requirements and Review**

**Full Proposal:** Prior to submitting a full proposal, investigators will be asked to participate in a second meeting with the Associate Director of the Delaware Sea Grant College Program to discuss feedback from the pre-proposal review process. One outcome of these discussions will be for Delaware Sea Grant to offer to serve as a liaison between prospective researchers and stakeholders that would benefit from the project so that a productive working relationship can be established and feedback can be shared. Investigators are strongly encouraged to take advantage of opportunities to include stakeholder input as they develop full proposals.

**Full Proposal Submission.** Please adhere to the following guidelines to ensure full consideration during the Delaware Sea Grant College Program full proposal review process. Submissions will be through an online portal. After submitting a pre-proposal, applicants will be granted access to the Delaware Sea Grant proposal and reporting system and will receive an automated welcome email with login information. Full proposal submissions will be due via this portal by **3:00 p.m., Friday, April 21, 2023**. Full proposals will be reviewed for adherence to the guidelines provided in the RFP prior to peer and technical review.

**Style and Format:** Minimum font size 12 pt. Minimum margin size one inch. Proposals should be single-spaced.

**Content and Organization:** Proposal submissions must include the following sections in the order listed.

**(1) Title Page:** Maximum 1 page.

- Name, affiliation, and contact information for each investigator
- Project title
- Project duration in months (not to exceed 24 months)
- Whether the proposal is for an Interdisciplinary Research Project or a Topic-Focused Research Project
- Total amount requested from Delaware Sea Grant and cost share provided



- A request for graduate student support, if needed, and number of students for which support is being requested. Topic-Focused research projects may request one graduate student. Interdisciplinary research projects may request up to two graduate students.
- Applicable Delaware Sea Grant focus area(s)

**(2) Abstract:** The abstract must contain a summary of the proposed activity suitably written for dissemination to a non-scientific audience. It should be a self-contained document that identifies the investigator(s), project title, whether the project is an Interdisciplinary Research effort or a Topic-Focused project. The body of the abstract (maximum 250 words) should include a brief description of the project, the overall goals of the project, methods to be employed and anticipated impacts of the project (i.e., benefits, outcomes). This document must not include any proprietary or sensitive business information as the Delaware Sea Grant College Program will make it available to the public upon announcement of awards.

**(3) The Proposal (main body of text):** Full proposal text (the main body of text) may not exceed 15 pages. The proposal should contain the following categories:

*Introduction:* Introduce the topic and describe the problem or opportunity of interest. What are the research questions addressed in this proposal? For hypothesis-driven research projects, list hypotheses to be tested here.

*Research Objectives:* Summarize the goals and objectives of the project: what is being proposed, what will the research accomplish or determine, and how will the project improve understanding. For Interdisciplinary Research Projects, indicate the role of each investigator in achieving these objectives. Project objectives should be verifiable upon the project's completion. Ensure the descriptions are consistent with the required Two-Year Project Milestone Chart (Item 11) as described below.

*Relevance to the Delaware Sea Grant Strategic Plan and Stakeholder Needs:* Describe how this research addresses goals outlined in the [Delaware Sea Grant Strategic Plan](#). Indicate stakeholders that will benefit from this research (e.g., resource managers, education professionals, community officials, private sector businesses) and how they will benefit. Be specific: Has the need for this research been communicated and if so, by whom? What is the motivation for this research? How have stakeholders participated in development of this proposal?

*Research Activities:* Describe how the project will be carried out, including methodology, relevant partners and their role, and any equipment or facilities requirements. For Interdisciplinary Research Projects, describe coordination among investigators.

*Community / Stakeholder Impacts:* Explicitly describe how the results of the proposed project may be used by stakeholders and/or end-users. Describe the connection between the proposed research and possible community, policy, management, education outcomes, industrial applications, and/or changes in environmental conditions that may result from the project. Include anticipated outputs and outcomes of the research, as described by the National Centers

for Coastal Ocean Science<sup>8</sup>. Outputs are defined as new information or products that result from the research. Examples include, but are not limited to, tangible services, results, and/or products, such as workshops, presentations to stakeholders and/or other related audiences, print or online resources, lesson plans, peer-reviewed publications, patents, festival exhibits, etc. Outcomes are changes in the knowledge or actions of the user, or a societal or environmental benefit that results from research. Ultimately, how will this project benefit citizens of Delaware? Investigators are strongly encouraged to participate in Delaware Sea Grant-facilitated discussions with stakeholders that may benefit from their work.

*Briefly* describe potential extension activities: How will results of this research be communicated to stakeholders identified above? What other audience(s) may benefit from this research? As noted previously, a full extension plan will be developed only after projects are funded. After funding has been awarded, the Delaware Sea Grant College Program will work collaboratively with researchers to develop and administer a full extension plan. Additional funds to support extension efforts will be available upon request.

*Justice, Equity, Diversity, and Inclusion Statement:* The work of Delaware Sea Grant provides benefits to a diverse suite of people broadly representative of the demographics of our state. This necessitates using an inclusive approach in project planning and implementation so that a diversity of views and opinions are considered and incorporated. Please describe how the proposed project will advance this work in terms of engaging diverse communities that may be impacted by, or benefit from, the proposed project. This statement should also discuss a plan to attract and graduate students from underrepresented racial and ethnic groups, individuals with disabilities, and individuals from economically or educationally disadvantaged backgrounds that have inhibited their ability to pursue careers in Science, Technology, Engineering, and Math (STEM) fields.

*Delaware Sea Grant Funded Graduate Students:* Describe how the Delaware Sea Grant funded graduate students will support the proposed research project.

*Partnerships:* Describe existing and planned partnerships with industry, agencies, or educational institutions that will occur during the course of the research. Note existing partnerships, and highlight important impacts of prior research activities on those partners.

*Facilities and Equipment:* List any facilities or equipment currently available and/or necessary for conducting the research; remember to provide justification for any equipment requested.

**(4) Data Management Plan:** The Delaware Sea Grant College Program is required by the National Oceanic and Atmospheric Administration (NOAA) to ensure that all environmental data collected with Delaware Sea Grant support are 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. Funded investigators are required to report environmental data and respond to requests for data sharing. Investigators

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<sup>8</sup> National Centers for Coastal Ocean Science. Outputs and outcomes. <https://coastalscience.noaa.gov/about/funding-opportunities/outputs-and-outcomes/>

therefore must include a data management plan, of no more than two pages in length, to specify plans for making environmental data available and interpretable within two years of collection in compliance with NOAA's Data Sharing Directive for Grants, Cooperative Agreements, and Contracts. Applicants understand that:

1. Environmental data and information collected or created under NOAA grants or cooperative agreements must be made discoverable by and accessible to the general public, in a timely fashion (within two years of the end of the award), free of charge or at no more than the cost of reproduction, unless an exemption is granted by the NOAA Program. Data should be available in at least one machine-readable format, preferably a widely used or open-standard format, and should also be accompanied by machine-readable documentation (metadata), preferably based on widely used or international standards.
  2. The contents of the Data Management Plan (or absence thereof), and past performance regarding such plans, will be considered as part of proposal review. A typical plan should include descriptions of the types of environmental data and information expected to be created during the course of the project; the tentative date by which data will be shared; the standards to be used for data/metadata format and content; methods for providing data access; approximate total volume of data to be collected; and prior experience in making such data accessible. The costs of data preparation, accessibility, or archiving may be included in the proposal budget. Accepted submission of data to the NOAA National Centers for Environmental Information (NCEI) is one way to satisfy data sharing requirements; however, NCEI is not obligated to accept all submissions and may charge a fee, particularly for large or unusual datasets.
  3. NOAA may, at its own discretion, make publicly visible the Data Management Plan from funded proposals, or use information from the Data Management Plan to produce a formal metadata record and include that metadata in a catalog to indicate the pending availability of new data.
  4. Proposal submitters are hereby advised that the final pre-publication manuscripts of scholarly articles produced entirely or primarily with NOAA funding will be required to be submitted to a NOAA Institutional Repository after acceptance, and no later than upon publication. Such manuscripts shall be made publicly available by NOAA one year after publication by the journal.
  5. Note that upon completion of the award a metadata report will be required to characterize environmental data, provide access instruction, and describe archival mechanisms. Data must be made available within 2 years of the end of the award unless an exemption is secured with written approval.
- (5) References:** List any relevant scientific or technical references included in the proposal text.
- (6) Summary of accomplishments of previously funded Sea Grant projects:** Investigators who have been previously funded by Delaware Sea Grant in the past ten years are required to submit a brief summary of accomplishments for up to two research projects that are most

closely aligned with the proposed research. Information on research findings and publications, outreach efforts, and students supported as part of the research should be highlighted. Maximum 2 pages.

**(7) Project Budget:** Use Sea Grant Budget Form 90-4, which can be found at: <https://seagrants.noaa.gov/insideseagrant/Implementation><sup>9</sup>. Maximum 3 pages - one budget per year and a cumulative budget are required (one page each). The budget must include funds to support the proposed extension and outreach plan that are consistent with the anticipated level of effort. The initiation date for new projects in this proposal cycle will be February 1, 2022. Award maximums are set at \$115,000 per year and \$75,000 per year, including indirect costs, for interdisciplinary and topic-focused research projects, respectively. Please note that costs associated with scientific publications (e.g., color printing fees, online publication) should be included in the project budget, and are no longer covered by the Environmental Public Education office. Do not include funds for extension activities in the budget. Additional funds to support extension efforts will be available upon request after development of an extension plan.

*Delaware Sea Grant Funded Graduate Students:* Do not include funds for graduate student support in the project budget. Under a separate funded project, and contingent upon available funding, additional funds will be available to support a graduate research assistant on Delaware Sea Grant projects. Interdisciplinary Research Projects may request up to two graduate students. Students receiving these funds will be fully supported to work on the Sea Grant research project as part of their work towards a graduate degree. These funded graduate students will be required to participate in additional Delaware Sea Grant-sponsored activities designed to enhance their understanding of the connections between science and outreach, education, or extension by working with Marine Advisory Service and Environmental Public Education specialists. These activities are intended to broaden Sea Grant student experience. A description of the role of the graduate student in the research project is required in the body of the proposal.

*Website and publication support:* Projects involving significant efforts for website development or maintenance through the Marine Advisory Service, Environmental Public Education, or IT staff should coordinate appropriate budget support with those offices prior to submission of the proposal in order to provide documentation of office commitment. The Environmental Public Education office will no longer cover publication costs; those should be included in the project budget.

*Ship time:* Additional ship time funds are no longer available. Please include in the budget any estimates for vessel usage (R/V, time, number of cruises, etc.).

*Matching Funds:* 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. Applicants from within the University of Delaware College of Earth, Ocean and Environment (CEOE) should contact Lori Hans ([lhans@udel.edu](mailto:lhans@udel.edu)) to discuss match requirements. CEOE applicants must request sufficient funds to support at least one month per year of salary for each investigator on the project. If applicants are struggling to either document or obtain sufficient

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<sup>9</sup> Please download: 90-4 Budget Form (Zip file containing Excel version of the form)

match funds, please contact Christian Hauser ([hauser@udel.edu](mailto:hauser@udel.edu)) as soon as possible in the proposal process to resolve any issues regarding match. Please contact your department research administrator to complete your budget.

**(8) Budget Justification:** Please refer to the instructions and sample budget justification located on the Delaware Sea Grant website ([Budget Justification Instructions and Sample](#)). Justification is required for each year for each cost entered in the budget form in the same order as noted on the Sea Grant Budget Form 90-4.

**(9) Curriculum Vitae (CV):** Maximum one page per investigator. Each CV should contain five distinct sections after the investigator's name and academic title:

- Education
- Experience
- Research Interests
- Professional Activities
- Publications (include no more than five publications for each investigator)

**(10) Current & Pending:** Provide a list of all current and pending support (both Federal and non-Federal) for each investigator. For each organization providing support, show the total award amount for the entire award period (including indirect costs) and the number of person months to be devoted to the project. Information should be presented separately for each investigator.

**(11) Project Milestone Chart:** See template located on our website ([Project Milestone Chart](#)).

**(12) Letters of Support:** Letters of support for the proposed work from end-users or stakeholders (such as resource managers, education professionals, community officials, private sector businesses, etc.) may be included. Such letters strengthen a proposal if detailed knowledge of the project is demonstrated, authors describe appropriate and feasible applications of the research (results or methods development), end-user resources are leveraged to extend the outreach of the research, and/or the research is particularly timely or innovative in the opinion of the end-user.

**(13) Non-binding list of competent reviewers:** Optional. Applicants may submit a non-binding list containing up to 10 competent reviewers. Please note that the Delaware Sea Grant College Program is under no obligation to use any of the reviewers submitted by the respective applicants for funding, and all reviewers are screened for conflicts of interest with all proposed researchers. Include the name and contact information for each suggested reviewer.

Please note, PIs from institutions outside the University of Delaware are responsible for routing the proposal through their institution's research administration and for obtaining all required institutional endorsements prior to submission. If you have questions about proposal preparation or the required forms, call Ms. Lori Hans at the Delaware Sea Grant Office at 302-831-8283 or contact via e-mail at [lhans@udel.edu](mailto:lhans@udel.edu). Specific questions related to the technical

review of research should be directed to Christian Hauser via e-mail at [hauser@udel.edu](mailto:hauser@udel.edu).

**Full Proposal Review Process:** The Delaware Sea Grant College Program full proposal review process includes: (1) external written peer review by experts in the field of proposed study. Reviewers will evaluate rationale and scientific merit of the project, innovativeness, and the professional qualifications of the investigators; (2) review and ranking by a technical panel of qualified experts in the fields of study; and (3) review and ranking by a programmatic panel giving consideration to the alignment of the projects with the stated goals and desired impacts for the Delaware Sea Grant College Program and overall research portfolio balance. Interdisciplinary and Topic-Focused Research proposals will be reviewed collectively. The number of Interdisciplinary and Topic-Focused Research Projects that are funded will depend on the quality and number of proposals received.

Following written peer review, each proposal will be discussed individually by the technical panel, followed by the programmatic panel discussion. Peer review and technical panel review criteria for full proposals are presented in Table 1; programmatic panel review criteria are presented in Table 2.

**Table 1: Peer and Technical Review Criteria**

Category	Relative Weight	Criteria
Scientific Merit	40%	Have the investigators identified an important question or compelling research topic? Are the hypotheses, research questions, and objectives clearly stated? Is the proposed work innovative? Is it good science? How will the work contribute to the field of study?
Methods	40%	Are research activities and methodology appropriate and feasible? Is the timeline as described reasonable? For Interdisciplinary Research Projects, is there an appropriate level of coordination between disciplines? How will results of interdisciplinary projects be integrated to achieve results?
Research Team Expertise	10%	Do the investigators have the experience necessary to conduct this research? Are specific, tangible examples provided?
Budget	5%	Is the budget reasonable and cost effective? Are more cost-effective alternatives available? Are travel costs (particularly requests for international travel) reasonable and appropriate?
Data Management Plan	5%	Is the Data Management Plan feasible? Do the researchers provide for the archiving and public access of the project data?



**Table 2: Programmatic Panel Review Criteria**

<b>Category</b>	<b>Relative Weight</b>	<b>Criteria</b>
Relevance to the Delaware Sea Grant Strategic Plan and Stakeholder Needs	35%	Will the research address the needs, goals, and objectives outlined within the Delaware Sea Grant Strategic Plan? Does the proposal describe how the project is relevant to specific stakeholder needs?
Community / Stakeholder Impacts	35%	What is the likelihood the research will produce significant outputs (information or products) and/or outcomes (changes in behavior or an improved societal or environmental condition) to address stakeholder needs? Has a clear connection been made between the proposed research and possible community, policy, management, education outcomes, or industrial applications? How have stakeholders participated in development of the proposal?
Justice, Equity, Diversity, and Inclusion	20%	Have the investigators presented a well-developed plan for how the proposed project will engage diverse communities that may be impacted by, or benefit from, the proposed project? Do the investigators have a plan to attract and graduate students from underrepresented racial and ethnic groups, individuals with disabilities, and individuals from economically or educationally disadvantaged backgrounds that have inhibited their ability to pursue STEM careers?
Partnerships	10%	Have existing and planned partnerships with industry, education, agencies, or non-profit organizations been adequately developed? Are the selected partnerships appropriate? Should additional key partners have been recruited to the project team?

Each category will be rated as:

- Excellent (5 points)
- Very Good (4 points)
- Good (3 points)
- Fair (2 points)
- Poor (1 point)

Scores for each category will be combined with the category weights to provide an overall weighted rating. Panel reviews will take into consideration peer reviews; equal weight will be given to the technical and programmatic panel reviews. The decision to recommend proposals for funding will ultimately rest with the Delaware Sea Grant Director and will be made at her discretion to meet needs, gaps and priorities of the DESG program as outlined in the DESG Strategic Plan. Full proposals that are recommended for funding by the Director will be forwarded to the National Sea Grant Office for final funding approval, which is contingent upon available Federal funds. Upon submission of full proposals, applicants agree to accept the decision of the National Sea Grant Office as final. Applicants will be notified of their selection

status upon approval from the National Sea Grant Office, anticipated by early October 2021, which will include feedback on their proposal consisting of peer review and technical and panel review comments.

## **Deliverables**

If tentatively selected for funding by the Delaware Sea Grant College Program, investigators will have two weeks to submit a project summary using the National Sea Grant Office Form 90-2 and an Abbreviated NOAA Environmental Compliance Questionnaire, both of which can be found here: <https://seagrant.noaa.gov/insideseagrant/Implementation><sup>10</sup>. These documents are required for final approval by the National Sea Grant Office. Failure to provide these forms within the timeframe indicated above will result in projects being removed from consideration. Investigators will also need to complete this [form](#) to comply with Executive Order 13985.

As noted in prior sections, after receiving the award, funded researchers will work collaboratively with the Delaware Sea Grant College Program to develop and administer an extension plan. To achieve this goal, the Associate Director of the Delaware Sea Grant College Program and the Director of the Delaware Sea Grant Marine Advisory Service will work with the research team to select appropriate extension and/or outreach staff to assist in these efforts. It is anticipated that most of these partnerships will develop organically as a result of Delaware Sea Grant-facilitated stakeholder discussions that occur as part of the proposal writing process. The selected professional will be a member of the project team, and should be included in routine team meetings and communications, as appropriate. Additional funds to support extension efforts will be available upon request, after development of the extension plan. The request for funds must be accompanied by a proposed budget and work plan.

While our staff actively work to reduce reporting burdens, the Delaware Sea Grant College Program, the National Sea Grant Office, and NOAA require mandatory yearly progress reports to evaluate both the Delaware Sea Grant College Program and progress of individual projects, some of which may be required at varied intervals. **Annual progress reports must be completed by the Delaware Sea Grant funded graduate students dedicated to each project.** In addition, all investigators must submit a final technical report that includes the entire funding period. All publications, theses, and dissertations produced as a result of Delaware Sea Grant funded research must be submitted to the National Sea Grant Library via the Environmental Public Education office. Delaware Sea Grant requires that all publications produced with Program support (in total or partial) include acknowledgement of the NOAA award number provided by the Program. By submitting a proposal, the investigators agree to these terms upon receipt of funding. Future grant funding may be jeopardized pending completion of reports as outlined in the project terms and conditions.

## **Delaware Sea Grant College Program Research Proposal Schedule**

**Question and Answer Sessions:** Both in-person and virtual Q&A sessions will be convened on the following dates:

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<sup>10</sup> Please download: 90-2 PDF Worksheet (Fillable PDF) and Abbreviated Environmental Compliance Questionnaire (Word document)

**Table 3: Question and Answer Sessions**

Date & Time
Tuesday, December 13, 2022, 10:00 a.m. (Newark)
Wednesday, December 21, 2022, 2:00 pm (Virtual)
Thursday, January 5, 2022, 10:00 a.m. (Lewes)

All informational sessions are optional and will be held to answer questions regarding this RFP. Sea Grant Management Team members as well as Marine Advisory Service and Environmental Public Education and Outreach staff will be available. Information regarding how to connect to the Zoom platform for each Q&A session is available at the following website:

<https://www.deseagrant.org/request-for-proposals/>.

- **Friday, February 3, 2023, 3:00 p.m.** - Pre-proposals are due and must be submitted via email to Delaware Sea Grant Associate Director, Christian Hauser at [hauser@udel.edu](mailto:hauser@udel.edu).
- **February 2023** - Feedback on pre-proposals are sent to investigators.
- **Friday, April 21, 2023, 3:00 p.m.** - Full proposals are due and must be submitted through an online portal. Submittal instructions will be provided with pre-proposal feedback.
- **October 2023** - Investigators are notified of review outcomes and preliminary funding decisions (project and graduate student support).

### Current Projects

Information regarding projects currently funded by Delaware Sea Grant is available at:

[www.deseagrant.org/research](http://www.deseagrant.org/research).

### Delaware Sea Grant College Program Management Team

The Delaware Sea Grant College Program’s Management Team includes the Director, Associate Director, Marine Advisory Service Director, Environmental Public Education Office Director, and Fiscal Officer. These individuals can answer questions you may have about the program and the proposal process.

Dr. Joanna York, *Director*, [jyork@udel.edu](mailto:jyork@udel.edu)

Christian Hauser, *Associate Director*, [hauser@udel.edu](mailto:hauser@udel.edu)

Christopher Petrone, *Marine Advisory Service Director*, [petrone@udel.edu](mailto:petrone@udel.edu)

Mark Jolly-Van Bodegraven, *Environmental Public Education Director*, [markjvb@udel.edu](mailto:markjvb@udel.edu)

Lori Hans, *Fiscal Officer*, [lhans@udel.edu](mailto:lhans@udel.edu)

### Delaware Sea Grant College Program Marine Advisory Service

David Christopher, *Marine Education Specialist*, [dmchrist@udel.edu](mailto:dmchrist@udel.edu)

Dr. Edward Hale, *Fisheries, Seafood, & Aquaculture*, [ehale@udel.edu](mailto:ehale@udel.edu)

Edward Lewandowski, *Coastal Communities Development*, [edlew@udel.edu](mailto:edlew@udel.edu)

Dr. Dennis McIntosh, *Aquaculture*, [dmcintosh@desu.edu](mailto:dmcintosh@desu.edu)

Danielle Swallow, *Coastal Hazards*, [dswallow@udel.edu](mailto:dswallow@udel.edu)

Dr. Edward Whereat, *Water Quality*, [whereat@udel.edu](mailto:whereat@udel.edu)